Use Arduino for Projects

Advanced View Arduino Projects List

List of Projects using arduino with advance view:
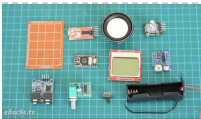
1. Light Up Clock for Kids – Green Means Go! Red, Stay in BED!!! We were going crazy without enough sleep!!! Our 2-year-old could not understand how to "wait for the 7" on the clock before coming out of his room morning after morning. He'd wake up early (I mean like 5:27am - "there's a 7!!!" he'd say) and...... Listed under: Clock – Timer Project Ideas

2. IOT Blink Anyone who's started learning about microcontrollers and code could tell you that a good place to start is by looking at the most basic example sketches provided. As often times their simplicity can teach you a lot more than you think. With the Arduino, one...... Listed under: Wifi - WLan Projects

3. Art Deco FM Radio Project Using Arduino https://youtu.be/kP_S3LuZBGA Dear friends welcome to another Arduino project Instructable! I am very excited because today I am going to show you how I built this Art Deco style FM Radio project using Arduino. It is by far the most complex project I have ever built and...... Listed under: Radio Projects

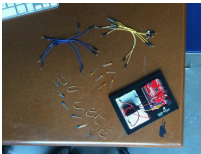4. TRASH-BOT. (Arduino Auto Open Close Trash Bin) Everything's getting smarter right? So why not your Trash Bin? This trash bin Opens and Closes its lid if it sees any Rubbish in front of it. You just need to bring the rubbish to it and it'll open automatically and will wait for you...... Listed under: Other Projects
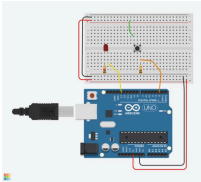
5. Electric-Analog Piano Music is a big part of our culture -- everyone enjoys listening to music. But while listening to music is one thing, learning to make music is another thing. Similarly, while making music is a difficult task, building a musical instrument is a whole new...... Listed under: Sound – Audio Projects

6. Circuito Arduino Controller Pad "Circuito" is a DIY controlling pad. It is a Supplementary project for my previous Robotic Arm project. The Controlling Pad is a computer controlled mechanical constructions that help to move and manage any robotic arm depend on servo motors. It can be considered kinetic control pad...... Listed under: Other Projects

7. LED Ukulele https://youtu.be/X27byIWzV4s Hi, my name is Elaine. This project combines a lot of things that I enjoy so I hope you enjoy it as well! The LED ukulele we'll be building teaches you how to play the four most played chords: C, G, Am, and F....... Listed under: LED Projects

8. Digital Input With a Pushbutton With Arduino in Tinkercad https://youtu.be/PC15jBx2UxI Let's learn how to read a pushbutton using Arduino's digital input! We'll connect up a simple circuit using a solderless breadboard and use some simple Arduino code to control a single LED. So far you've learned to control LEDs with code, which is one use...... Listed under: LED Projects

9. Arduino Pocket Game Console + A-Maze – Maze Game Welcome to my first instructable! The project I want to share with you today is Arduino maze game, which became a pocket console as capable as Arduboy and similar Arduino based consoles. It can be flashed with my (or your) future games thanks to exposed...... Listed under: Game – Entertainment Projects

10. 3D Printed Prosthetic Hand With Capacitive Touch Sensing In this Instructables I've come with an idea that can be implemented to existing 3d printed prosthetic hands. In existing electrically powered prosthesis I Couldn't find the use of capacitive touch sensing technology for the actuation of fingers. This project combines two very cool things, Arduino with Capacitive...... Listed under: Sensor – Transducer – Detector Projects

11. Internet Speed Gauge https://youtu.be/SG91jSD1xAk Overview This "Internet Speed Gauge" will give you near real time oversight of your network usage. This information is available on the web interface of most home routers. However, accessing it requires you to stop your current task to go look it up. I...... Listed under: Internet – Ethernet – LAN Projects

12. Simple Braille Writer (Speech to Braille) https://youtu.be/y-N4hqFgOtE Hello everyone, All this started with doing a simple XY plotter after completing it successfully, I thought to develop a simple speech to braille text converter.I started searching it online and unexpectedly the prices were too high,that boosted me built a small portable and...... Listed under: Other Projects

13. Phone+Arduino Controlled Teddy Ruxpin In this instructable I will be demonstrating how to control Teddy Ruxpin with a phone and the help of an arduino. After

14. **A Useful Remembrall** If you've ever watched the Harry Potter series, then you would have seen Neville receive a gift from his Gran which was a Remembrall. For those Muggles who haven't watched it yet or don't remember the scene, a Remembrall is a large marble sized glass...... Listed under: Other Projects

15. **Mini CNC Laser Wood Engraver and Laser Paper Cutter.** This is an Instructables on how I made an Arduino based Laser CNC wood engraver and Thin paper cutter using old DVD drives, 250mW laser. Playing area is 40mm x 40mm max. Isn't it fun making a own machine out of old things? Step 1:...... Listed under: CNC Machines Projects

16. **Anti-Social Glasses** You look up, they tilt down! A tilt switch controls 2 servos which open/ close shutters on a pair of custom glasses. project by Rob Faulkner and You-Wen Ji Step 1: Parts (1) 30 x 60 cm plastic sheet (We used polystyrene but its up...... Listed under: Other Projects

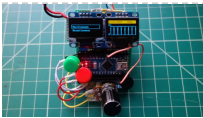17. **IoT Desktop Console. Part : 11 IoT, Home Automation** Preamble This article, the 11th in a series on home automation documents how to create and integrate an IoT Desktop Device into an existing home automation system including all the necessary software functionality to enable the successful deployment within a domestic environment. Picture 1 shows the completed...... Listed under: Home Automation Projects

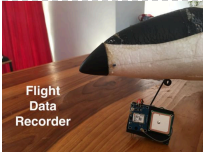18. **Robotic Arm Controlled by Glove** Purpose: Gain experience, and problem-solving skills by creating a project to complete Outline- Use a glove to connect through an arduino to control a 3-D robotic printed "arm". Each of the joints on the 3-D printed arm has a servo which connects to the flex...... Listed under: Robotics – Automation Projects

19. **Aerobic Arduino – a $15 Fitness Tracker Power by an Arduino** Please vote for this in the fitness challenge instead of a Fitbit or a smartwatch, you can build an Arduino powered fitness tracker for only $15! It tracks the pumping motion of your arms while running and uses an accelerometer to detect this. It is...... Listed under: Security – Safety Projects
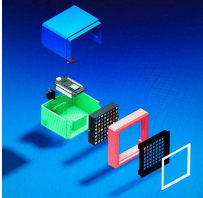
20. **Arduino Ultra Mega Timers** https://youtu.be/_PL-bci4e0s Hi! "Arduino Timer with on/off setpoint" is my most viewed instructable by far, so i got a lot of questions in the comments, inbox and youtube, about how to add minutes,seconds, days and save settings on the eeprom.... so i decided to bring an...... Listed under: Clock – Timer Projects

21. **Arduino Energy Meter – V2.0** Hello friend, welcome back after a long break. Earlier I have posted an Instructables on Arduino Energy Meter which was mainly designed to monitor the power from the solar panel (DC Power) in my village. It became very popular on the internet, lots of people all over...... Listed under: Metering – Instrument Projects

22. **DIY Telematics Box** Telematics boxes (aka Black Boxes) are used to record and log various attributes of a moving vehicle. They have been primarily used in airplanes to log various attributes of an aircraft, for example, air speed, heading, fuel levels, radio chatter etc. It is the first...... Listed under: Other Projects

23. **ArduMeter: an Arduino Based Multimeter (Sort Of)** The ArduMeter is an Arduino Based Multimeter, which many people have made to perform different operations, and searching on google you could find all the variety of things it can do. I wanted to make one that is portable, quite easy to use, give decent...... Listed under: Metering – Instrument Projects

24. **RC Flight Data Recorder/Black Box** In this instructable I am going to be building a arduino based fight data recorder for RC vehicles, specifically RC aeroplanes. I am going to be using a UBlox Neo 6m GPS module connected to an arduino pro mini and a SD card shield to...... Listed under: Temperature Measurement Projects, Video – Camera – Imaging Projects

25. **Make an Illuminated Rainbow Synthesizer With an Arduino!** https://youtu.be/MOnr_VLFBWg This Instructable shows you how to add a high-resolution touch screen to your Arduino and make a synthesizer that controls colored LEDs! The techniques you learn here can serve as a foundation for other touch screen projects! In this Instructable, you will learn: Where...... Listed under: LED Projects

26. **RGB Box Clock** https://youtu.be/7inXakX4XOs This is a clock and decorative RGB Led Matrix It's controlled by a Colorduino Shield and NodeMCU v3 Board using i2C communication. With Blynk app you can setup the alarm,change colors and other things. Parts list is: LoLin V3 NodeMcu Lua CH340G ESP8266 Board...... Listed under: Clock – Timer Projects

27. **Arduino Lilypad Controlled NeoPixel Earrings** https://youtu.be/7B3Uz_2O9Rw Hello everyone, Don't you want to have such a nice and cool earring when you go out at night or for parties? I would like to have it, that's why I made Arduino Lilypad Controlled Neopixel Earrings. 🙂 These earrings don't just light up....... Listed under: Pinouts

28. **Control Your Model Train Layout With Your TV REMOTE!** In this instructable, I will show you how to make an IR remote control system for a model train. You will then be able to control your trains while relaxing on your couch. So, let's get started! Step 1: Collect All the Stuff! Here is the...... Listed under: Motor Projects

29. **TerraDome : Mini Tropical Greenhouse With Arduino** TerraDome is an indoor greenhouse for plants and tropical flowers shaped octagonal dome. It is driven by an Arduino Mega that regulates temperature and lighting through different sensors and an LCD display. It also has doors to the Jurassic Park (or Jurassic World) that opens...... Listed under: Temperature Measurement Projects

30. [Smartphone / Tab Controlled ROBOT ARM !!](#) Making ROBOT ARMs is very popular and fun among hobbyists,but it's not that easy to control a ROBOT ARM. So today we'll be making a robot arm that can be controlled using just your Android Smartphone or tablet. Good news is, you just need to...... Listed under: [Robotics – Automation Projects](#)

31. [Riding Through Walls: Google Street View Stationary Bike Interface](#) The Riding Through Walls: Google Street View Stationary Bike Interface allows you to cycle through Google Street-View from the comfort of your living room. Using some simple electronics, an Arduino, a stationary bike, a computer, and projector or TV you can explore the world without...... Listed under: [Other Projects](#)

32. [NeoPixel Ring Kaleidoscope](#) I am pleased to offer instructions and material files for making a LightLogo Kaleidoscope! I have been thinking about doing this for many months and finally worked out a design. If you have any improvements on this design please do share! You will need: Adafruit...... Listed under: [Other Projects](#)

33. [Make Your Own 1D Pong Game](#) For this project I will show you how I combined an MDF board with buzzer buttons, LEDs and an Arduino Nano in order to create a 1D Pong Game that is really fun to play. Along the way I will show you how to create...... Listed under: [Game – Entertainment Projects](#)

34. [DIY ACRYLIC INDIGO BUTTERFLY LAMP.](#) The Indigo Butterflies looks so awesome, Aren't they? Colors, Colors, Everywhere. Some are here, and some are there. Mood Lighting to be Happy, Relaxed, or Focused. In this Instructable I'll show you how I build an Acrylic LED Lamp with WS2812B addressable RGB LEDs, Acrylic Cylinder with...... Listed under: [LED Projects](#)

35. [Arduino Serial Monitor in Tinkercad](#) Keeping track of everything going on in your program can be an uphill battle. The serial monitor is a way to listen to what's going on in your code by reporting back to the computer over the USB cable. In the Tinkercad Circuits simulator, the Serial Monitor...... Listed under: [Other Projects](#)

36. [Arduino Word Clock Mini](#) Arduino Word Clock Mini- Anniversary Clock Relatively easy to build Word Clock using a Arduino Nano and four MAX7219 32mm Dot Matrix Display ModulesChoice of styles, picture frame or Perspex cube with various base options. Specs Mini Arduino Word Clock with minute resolution of time...... Listed under: [Clock – Timer Projects](#)

37. [Virtual Reality Flying Machine (Arduino)](#) This project goes through converting a hammock into a VR flying machine. We will use a VR app that is running the WRLD SDK in Unity so you can input whatever GPS coordinates you want and fly around that area in VR! This VR app...... Listed under: [GPS Based Projects](#)

38. [OLED Tutorial | Convert SPI to I2C](#) In this tutorial, we are going to learn about OLED displays. Which can be very easily interfaced with Arduino and can display important parameters for your project, and see how to convert these screens from SPI to I2C, So let's get started! Step 1: Watch...... Listed under: [LED Projects](#)

39. [Arduino Robot Arm](#) Arduino robot arms are among the most popular DIY projects. We decided to make ours out of recycled materials we found in our workshop. We hope you enjoy this build. https://youtu.be/T6Tffi3uX2w Step 1: Electronics Main components Arduino UNO3 SparkFun Servos (Generic Metal Gear) PS2 Joystick...... Listed under: [Robotics – Automation Projects](#)

40. [Arduino-based LED "Bloody Red" Automatic Stairs](#) WHAT? Hi! I've made bleeding LED stairs! It's a new Instructables leveraging some hardware installation I had done already from a previous I'ble from mine. I made a RED animation that resembles blood drops, perfect to be activated automatic during those trick or treat moments!...... Listed under: [LED Projects](#)

41. [Jump Sensitive Neopixel Trampoline](#) In this instructable, I will show you how to build a trampoline that changes colors whenever you jump on it! https://youtu.be/k_8mHe4OKWg Step 1: The Things You Need Materials: 3 rolls of wire, different colors, the thinner the betterSolder, the thinner the better - I had...... Listed under: [Other Projects](#)

42. [Dual Sensor Echo Locator](#) This instructable explains how to pinpoint the location of an object using an Arduino, two ultrasonic sensors, and Heron's formula for triangles. There are no moving parts. Heron's formula allows you to calculate the area of any triangle for which all sides are known. Once...... Listed under: [Sensor – Transducer – Detector Projects](#)

43. [(almost) Universal MIDI SysEx CC Programmer (and Sequencer...)](#) In the mid eighties synths manufacturers started a "less is better" process that led to barebones synths. This allowed the reduction of costs on the manufaturer side, but made the patching process tediuos if not impossible for the final user. Manufacturers themselfs and third party...... Listed under: [Arduino Programmer Projects](#)

44. [IPad Play Timer](#) I think this is a topic every parent is struggling with. How much can the kids play with their iPads (or any other tablet). We tried multiple approaches, like fixed times, but that did not really work as our kid then always wanted to go home...... Listed under: [Clock – Timer Projects](#)
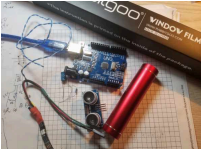
45. [IoT Hydroponics – Using IBM's Watson for PH and EC Measurements](#) This instructable will show how to monitor EC, pH, and temperature of a hydroponics setup and upload the data to IBM's Watson service.Watson is free to get started with. There are paid plans, but the free plan is more than enough for this project. Step...... Listed under: [Other Projects](#)

46. [DIY Miniature Solar Tracker](#) In this project I will show you how to create a solar tracker which like the name implies can follow the movement

47. [Infinity Mirror With Ultra Sonic Sensors](#) This was my project for Hack Sioux Falls. I built it one weekend and it turned out a lot different than I thought it would. It was a lot of fun and there are a lot of variations on what you could have the Arduino...... Listed under: [Sensor – Transducer – Detector Projects](#)

48. [Unicorn Horn With NeoPixel LEDs & Arduino Lilypad](#) Today I'm gonna make 3D Printed Unicorn Horn. I saw and did the project in Adafruit's website about a year ago but I could not find an opportunity to share it. It looks great when going out to the party and especially in the evenings....... Listed under: [LED Projects](#)

49. [DIY Li-ion Capacity Tester !](#) When it comes to building the battery packs, Li-ion cells are one of the best choices without the doubt. But if you get them from old laptop batteries then you might want to do a capacity test before building the battery pack. So today I...... Listed under: [Battery Projects](#)
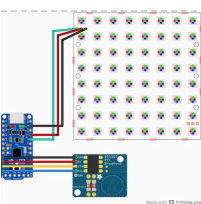
50. [ESP8266 Temperature Controlled Relay](#) A friend of mine is a scientist who does experiments that are very sensitive to air temperature and humidity. The incubator room has a small ceramic heater but the heater's thermostat was not nearly accurate enough, only able to maintain the temperature within 10-15 degrees....... Listed under: [Temperature Measurement Projects](#)

51. [ESP8266 LED Matrix Clock](#) ESP8266 LED Matrix Clock Simple LED matrix Clock based on the popular ESP8266 with Real Time Clock module and time synchronization over WiFi from an NTP server. NEW ! ESP32 version also available Step 1: Parts and Tools First let's see what we need. Parts: 6 x...... Listed under: [Clock – Timer Projects](#)
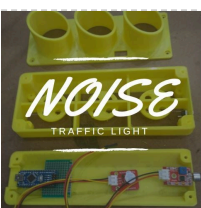
52. [Morphing Digital Clock](#) A quick video about this project. I have since implemented a way to set timezone. Thanks to the work of the Arduino and ESP8266 community, this cool clock is a surprisingly easy to build! https://youtu.be/i0M6F4wRxGc Just two main components: Display (obviously) and a WiFi MicroController...... Listed under: [Clock – Timer Projects](#)
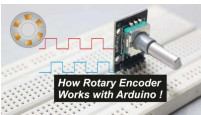
53. [NeoMatrix 8×8 Word Clock](#) Are you fascinated with the passage of time? Do you want a stylish, modern and functional timepiece to add to your clock collection? The word clock is a one-of-a-kind time telling device, using a grid of letters to spell out the time. While you could...... Listed under: [Clock – Timer Projects](#)

54. [ROOM MAPPING Arduino Robot With Unity 3D](#) This project uses an Arduino robot running a ESP-8266 Node MCU that communicates (and drives around) with a mobile phone. The phone is running an app made in the video game engine Unity 3D that does 3 things: 1.) The first scene allows you to...... Listed under: [Robotics – Automation Projects](#)

55. [Noise Traffic Light – DIY 3D Printed](#) All people want to work in silence and It's important to have a good working environment. The silence leads to an efficient work. We did this project to reach this proposal. The noise traffic light consists of a 'traffic light' which controls the dB of...... Listed under: [Other Projects](#)

56. [How Rotary Encoder Works With Arduino!](#) A rotary encoder is a great input device for any project such as a 3D printer's menu. So in this tutorial, we will learn how a rotary encoder works and how to use it with Arduino. So let's get Started! Step 1: Watch the Video...... Listed under: [Other Projects](#)

57. [Bluetooth Controlled Robot Car](#) were you always fascinated by RC cars ? Ever wanted to make one yourself ? controlled by your own smartphone ? ----> lets start https://youtu.be/iETSrpiCAn0 So, hey guys, here in this project i have tried to make a Bluetooth controlled car with the help of...... Listed under: [Bluetooth Projects](#)
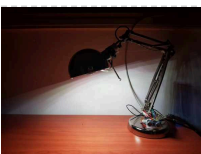
58. [Low-Poly Iron Man With Wifi-Controlled LED Strips](#) This interactive wall art piece is approximately 39" tall and 24" wide. I laser cut the wood at Clemson University's Student Makerspace, then I hand-painted all the triangles and installed the lights on the back of it. This instructable will walk through how I made...... Listed under: [LED Projects](#)

59. [Binary LED Marble Clock](#) Now I think just about everybody has a binary clock and here's my version. What I enjoyed was that this project combined some woodwork, programming, learning, electronics and perhaps just a little artistic creativity. It shows time, month, date, day of week, temperature and humidity...... Listed under: [Clock – Timer Projects](#)

60. [Giant Retro Gamepad](#) So we decided to make a giant working gamepad... ¯_(ツ)_/¯ The basic idea was to use up some scrap wood and add some inexpensive electronics to make it functional while keeping the overall costs low. I already had most of the materials lying around my...... Listed under: [Game – Entertainment Projects](#)

61. [Study Better With a Smart Desk Lamp – IDC2018IOT](#) People in the western world spend a lot of time sitting. At the desk, driving around, watching TV and more. Sometimes, sitting too much can harm your body and harm your focusing abilities. Walking and standing up after a given time is crucial to perform...... Listed under: [LED Projects](#)

62. [Retro Arcade Clock – Arduino](#) Build an interactive arcade bedside clock, with a touchscreen, and animated arcade figures that you can record a sound of your choice for the alarm. This is an update of a previous project which now includes a 3D Printed Case and four separate programs to...... Listed under: [Clock – Timer Projects](#)
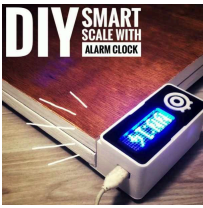
64. **ARDUINO BASED OIL DISPENSER** we all love food isn't that right? of course yes, everyone has tried cooking once in their life, and already knows the struggle to get exact amount of oil for the perfect recipe, so here is a project which will help you get it correct, follow the…… Listed under: Other Projects

65. **How to Make a Digital Watch** This is the first time I am writing an Instructable so hopefully I write well enough for you to understand. Today I will be telling you how to make a digital watch from a website that I found. The website is called sainsmart.com. It was…… Listed under: Clock – Timer Projects

66. **80s Style Melting Digital "Dali" Clock** This Instructable shows you how to build an 80s style digital "dali" clock with melting digits. I first came across this style of clock on the Apple Macintosh back when I was a kid in the 80s. This Instructable shows my attempt to recreate the…… Listed under: Clock – Timer Projects
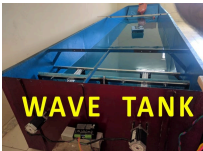
67. **DIY Wave Tank/flume Using Arduino and V-slot** A wave tank is a laboratory setup for observing the behavior of surface waves. The typical wave tank is a box filled with liquid, usually water, leaving open or air-filled space on top. At one end of the tank an actuator generates waves; the other…… Listed under: Other Projects

68. **IoT Split-flap Weather Forecast Powered by XOD** Hi everyone! In this instructable, I tell you how to make split-flap display and show the current weather conditions on it. Also how to fetch the weather information from the Web using Wi-Fi and API. I am a fan of the XOD visual programming environment. With…… Listed under: Other Projects

69. **Lightpipe 7-Segment Display** What if I told you that you could build a display out of shoe laces!? Well that is exactly what I've done! Building your own seven segment display is nothing new, it's a very common Arduino project, but I had an idea for this one…… Listed under: LED Projects
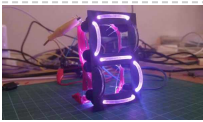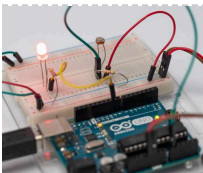
70. **Light Sensor (Photoresistor) With Arduino in Tinkercad** Let's learn how to read a photoresistor, a light-sensitive type of variable resistor, using Arduino's Analog Input. It's also called an LDR (light-dependent resistor). So far you've already learned to control LEDs with Arduino's analog output, and to read a potentiometer, which is another type of variable…… Listed under: Sensor – Transducer – Detector Projects

71. **ITTT – Sunlight Simulating Lightbox** I made a Sunlight simulating lightbox with a mountain village skyline, that I might upgrade to a wake-up light some time, for a school project. Step 1: Get the Supplies Supplies I used: -Arduino UNO -Neopixel ledstrip 1m, 30 leds(DC5V-W2812) -3 jumper wires -USB cable…… Listed under: LED Projects

72. ***IMPROVED* Smart LED Candle: Reactive to Sound and Aesthetically Pleasing** Remember the "smart" LED candle from a few months ago? Well, the idea was nice, but the overall execution lacked some oomph. Technologically and aesthetically speaking there was a lot to improve. First off, as an artist, I wanted the container for the candle to look amazing……. Listed under: Sound – Audio Projects
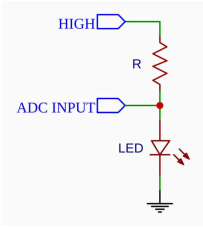
73. **An LED You Can Blow Out Like a Candle!** LEDs are designed to emit light, but they also make surprisingly capable sensors. Using only an Arduino UNO, an LED and a resistor, we will build a hot LED anemometer that measures wind speed, and turns off the LED for 2 seconds when it detects…… Listed under: LED Projects

74. **Biometric Personal Diary** This neat little gadget has a fingerprint sensor so you can secure your cool stuff in a personalised portable case. I use to hold a diary and pen and designs for my new projects. Features a 3d printed case and uses an Arduino nano. Great…… Listed under: Other Projects

75. **DIY Adjustable Constant Load (Current & Power)** In this project I will show you how I combined an Arduino Nano, a current sensor, an LCD, a rotary encoder and a couple of other complementary components in order to create an adjustable constant load. It features a constant current and power mode and…… Listed under: Other Projects

76. **Arduino Arcade Lego Games Box** If you have kids, you are likely facing the same issues as we did with the Lego sets you bought for them. They assemble and play with them but after a while the sets transform into a single pile of bricks. The kids grow up…… Listed under: Game – Entertainment Projects

77. **Ultrasonic Distance Sensor in Arduino With Tinkercad** Let's measure distances with an ultrasonic rangefinder (distance sensor) and Arduino's digital input. We'll connect up a circuit using a breadboard and use some simple Arduino code to control a single LED. You may have already learned to read a pushbutton and PIR motion sensor with Arduino's digital input,…… Listed under: Sensor – Transducer – Detector Projects

78. **DIY Electronic Locker Using Fingerprint Sensor** Bored of keeping track of countless locks and their keys? How about using your own fingerprint to unlock each and every safe in your house, just like your Smartphone? Sounds cool, right? Let's make an electronic Fingerprint locker that will keep all your secrets a…… Listed under: Security – Safety Projects

80. [Arduino Robotic Bartender – 3D Printable & Bluetooth](#) Build yourself a low-cost easy to assemble bluetooth controllable robotic bartender using an Arduino Uno. This easy Arduino based project can be 3D printed and is a cool Arduino project for beginners. The aim of this project was to create a bar robot that was…... Listed under: [Robotics – Automation Projects](#)

81. [LED Dancing Robots](#) I wanted to make something so I could find our camp at night at Burning Man 2018. 2018 was a robot theme and I'm a fan of neon but no way was gonna head that route so I came up with an idea about a…... Listed under: [Robotics – Automation Projects](#)

82. [Spatial Synthesizer Kravox! Wireless, Motion- & Touch-Sensing](#) A New Kind of InstrumentI invented Kravox during a research project at Lund University (Sweden) with the aim to give digital musical instrument controllers the feeling of conventional, mechanical instruments. Now I want to make Kravox accessible as a musical experimentation platform for everyone, so…... Listed under: [Wireless Projects](#)

83. [WiFi Smart Power Strip With NodeMCU](#) This is an easy-to-do and quite cheap WiFi Smart Strip that can control 4 sockets independently from all around the world from your smartphone, tablet or computer. Everything you need is an internet connection. You can use it for christmas lights, or fan or everything…... Listed under: [Wifi - WLan Projects](#)

84. [Arduino LCD Stick Man Game!](#) hey there Electronic Enthusiasts! Kids, Adults, Seniors, in fact everyone loves games! so here is another Awesome Project based on Arduin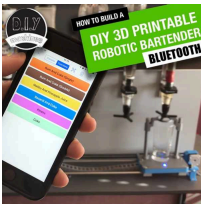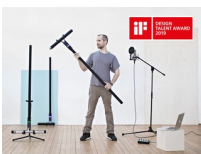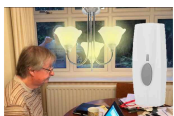o, yes its a GAME, follow this pretty INSTRUCTABLE to make your own Arduino LCD Stick Man Game! Step 1: Watch the Video! https://youtu.be/P97DJQUtKKU Step 2: Gather…... Listed under: [LCD Projects](#)

85. [Talking Baymax Display for a Pediatrician's Office](#) "Hello. I am Baymax, your personal healthcare companion." - Baymax At my local pediatrician's office, they have adopted an interesting strategy in an attempt to make the medical environment less stressful and more fun for kids. They have filled the entire office with movie posters…... Listed under: [Sound – Audio Projects](#)
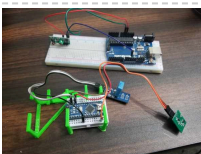
86. [Hearing Impaired Doorbell Room Light Hack](#) Problem: my dad is registered as deaf and my mum is hearing impaired and due to this they often find it difficult to hear the doorbell. This could be a problem suffered by many others as well. They bought a flashing light doorbell to help…... Listed under: [Sound – Audio Projects](#)

87. [Meet Twinky the Cutest Arduino Robot](#) Hi,In this instructable I'm going to teach you how I made my own "Jibo" but called "Twinky" I want to clear this up... THIS IS NOT A COPY! I WAS BUILDING TWINKY AND THEN I REALIZED THAT SOMETHING LIKE THIS ALREADY EXIST :c It has…... Listed under: [Robotics – Automation Projects](#)

88. [Animated Spooky Pumpkin Eyes](#) A couple of years ago while looking for inspiration for a new animated Halloween prop we stumbled upon a video from YouTube contributor 68percentwater called Arduino Servo Pumpkin. This video was exactly what we were looking for, however, some of the details seemed to be missing. So, we decided we…... Listed under: [Other Projects](#)

89. [Autostat : a Remote Thermostat](#) The question you are probably asking is "why are you making another remote thermostat?" The answer to that question is, I had to, and the market smart thermostats are too expensive. Fair warning, this is "proof-of-concept" build that would require a few extra outputs to actually control…... Listed under: [Other Projects](#)

90. [Morse Code for Kids.](#) Morse code unit for kids. Variable speed and different levels. My son goes to CUBS and has a special event coming up. This event is all about communicating with other Scouts/Cubs from around the world? Via radio, also over the weekend there will be other…... Listed under: [Game – Entertainment Projects](#)
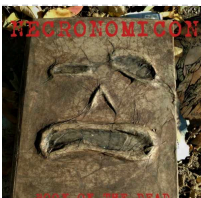
91. [Model Railway Layout With Automated Siding](#) Making model train layouts is a great hobby, automating it will make it a lot better! Let us take a look at some of the advantages of its automation: Low-cost operation: The whole layout is controlled by an Arduino microcontroller, using an L298N motor driver, their…... Listed under: [Game – Entertainment Projects](#)

92. [ESP32 Xiaomi Hack – Get Data Wirelessly](#) Dear friends welcome to another Instructable! Today we are going to learn how to get the data that this Xiaomi Temperature and Humidity monitor transmits using the Bluetooth functionality of the ESP32 board. As you can see, I am using an ESP32 board and a 2.8" color…... Listed under: [Wireless Projects](#)
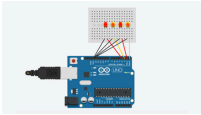
93. [Dropping Spider on Doorbell – Halloween Scare Prank](#) This Halloween my son Max, came up with the idea to drop a spider on anyone who tries to ring our doorbell... I immediately jumped on the idea and we started to work on it. Using a simple ultrasonic distance sensor (HC-SR04) and a servo…... Listed under: [Sound – Audio Projects](#)

94. [Screaming Necronomicon](#) "Alright you Primitive Screwheads, listen up! You see this?" - Ash, Army of Darkness Each time an unsuspecting victim lifts the cover this disgusting book, a bloodcurdling scream pierces the air. This project uses an Arduino Uno, a light sensor and an MP3 player to bring…... Listed under: [Other Projects](#)

95. **Realistic LED Candle** If you've even seen a fake candle you have probably noticed how it doesn't look realistic. Whether you're trying to add some atmosphere to a dinner or light up a jack'o-lantern, your choices are limited. A real candle has a fire hazard, but a fake...... Listed under: LED Projects

96. **D.I.Y SMART RGB MATRIX 8×16** In this project, I'll show you how to make your own 8×16 RGB LED Matrix using Arduino Uno/ Nano. An LED Matrix can show scrolling messages, display animations, music spectrum analyzer … With integrating NodeMCU, it can be used as small screen to show weather...... Listed under: LED Projects

97. **Frankenbot With Sound Effects and Lights** I was inspired by the cute Frankenbot papercraft, so I thought why not make it truly alive by giving it some blinking lights and sounds effect. Here is the plan: - Connect 2 LEDs for the eyes (different colours of course) and only one eye...... Listed under: Sound – Audio Projects

98. **Bucky Touch: Light-up Dodecahedron Instrument** About two years ago, I built a big 120 face LED geodesic dome that plays music with a MIDI output. However, it was a difficult build and the sensors weren't completely reliable. I decided to build the Bucky Touch, a smaller version of my geodesic dome that...... Listed under: Development Board – Kits Projects

99. **Charlieplexing Made Easy (and What It Even Means?!)** Charlieplexing. Aside from being a fancy word it is a technique for driving multiple LEDs with relatively few pins on a microcontroller. It allows you to drive N*(N-1) LEDs with just N pins without requiring any additional hardware, making it a quick, cheap and easy...... Listed under: LED Projects
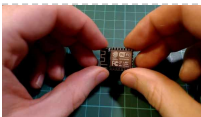
100. **OLED I2C DISPLAY WITH ARDUINO Tutorial** Hello there! Fellow electronics enthusiasts, I am quite sure we all make some or other projects, as a part of our learning experience or academics. We sure would want to display some data present on our micro-controllers, from sensors or simply display some message, so here...... Listed under: LED Projects

101. **Spooky Teddy – Arduino Powered Self-rocking Chair & Rotating Head** Spooky teddy is a 2-part Halloween decor. The first part is the teddy bear that has a 3d printed mechanism that can rotate with an Arduino UNO and a solenoid. The second part is a self-rocking chair powered by an Arduino nano and a solenoid...... Listed under: Game – Entertainment Projects
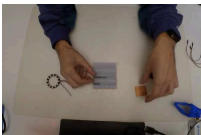
102. **Animated Chocolate Box (with Arduino Uno)** Once I saw a beautiful box of chocolate in a store. And the thought occurred to me to make an awesome gift out of this box - an animated box with chocolate. What we need: Clear plastic chocolate box9V batteryBattery cable adapteruSD 1GBArduino UnoTFT Shield...... Listed under: Other Projects

103. **3 Simple Ways of Programming an ESP8266 12X Module** If you are not familiar with ESP8266 micro controller, I really feel you have been missing out! These things are incredible: they are 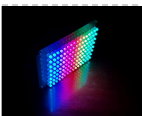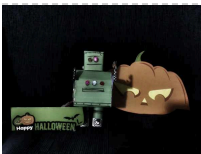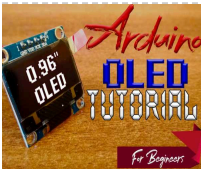cheap, powerful and best of all have built-in WiFi! ESP8266 started their journey out as a WiFi add on board for more...... Listed under: Arduino Programmer Projects

104. **Candy Claw Machine – Arduino Based Arcade Game** Eyes on the prize, Violet. Eyes on the prize! Get ready for a candy-grabbing face-off with your family and friends with this classic arcade game - the candy claw machine! But this time, it's going to be a bit different - first, it's going to...... Listed under: Game – Entertainment Projects

105. **Remote Color Controlled Jack-o-Lantern** As usual, this Halloween I decided to create a project related to the season. Using Prusa I3 and Thingiverse, I printed a Halloween decoration where the color is controlled remotely through the Blynk project. https://youtu.be/CpKM5cp7RmI The Blynk project lets you create a mobile or tablet...... Listed under: Robotics – Automation Project Ideas

106. **Arduino Zener Diode Tester** Zener Diode Tester is controlled by Arduino Nano. Tester measure breakdown Zener voltage for diodes from 1.8V to 48V. Dissipation power of measured diodes could be from 250mW to a few Watts. Measuring is simple, just connect diode and press button START. Arduino Nano gradually...... Listed under: Other Projects

107. **Arduino Weathercloud Weather Station** I made a weather station connected to internet. It measures temperature, humidity, pressure, rainfall, wind speed, UV index and it calculates few more important meteorological values. It then sends this data to weathercloud.net, which has nice graphics and UX. It also has a weather webcamera. It...... Listed under: Other Projects
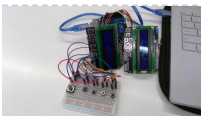
108. **Automated Train Reverse Loop Using Arduino** Making reverse loops can help in model train layouts to change the direction of trains, which cannot be done with turntables. In this way, you can create single-track layouts with a reverse loop on each end to run trains without any pause or interruption. So,...... Listed under: Motor Projects

109. **Mug-O-Matic: a Modular Tiny CNC Drawing Robot!** Mug-O-Matic is a one of a kind DIY toy, a real 3-axis Tiny CNC drawing robot that can customize coffee mugs! This capable little robot can draw anything you want via manual control, bluetooth, calculated algorithms, or even g-code. So you can enjoy your custom mug...... Listed under: Robotics – Automation Project Ideas

110. **How to Make an Arduino Radar** This is a radar, designed to detect the distance and direction an object is from the ultrasonic sensor. With the ultrasonic sensor connected to a servo, it has the ability to rotate 180 degress, similar to a radar utilised to detect the position of planes....... Listed under: Other Projects

111. **Arduino – Piano Tiles** Hello internet people, This is gonna be about how to make what DEFINITELY isn't a rip off of a mobile game on an arduino uno r3. so to start, your gonna need all the parts, which are as follows!1x Arduino Uno r3 ($42) 2x LCD Keypad Shield ($19 each) 5x buttons...... Listed under: Sound – Audio Projects

Step 1:...... Listed under: [Wireless Projects](#)

113. [Shoe-Mounted Running Distance Tracker](#) Since runners often need to track not only their total mileage, but also the distance run on each pair of shoes (in order to know when to replace them), this project seeks a solution to the problem of how to keep track of these numbers....... Listed under: [GPS Based Projects](#)

114. [Interactive Cylindrical Cube](#) This is a creative cylindrical LED cube with proximity sensing by infrared led and photo-transistors. Interactive Cylindrical Cube includes: 8X8 royal blue LEDs, 12 infrared LEDs, 16 photo-transistors and all of them are bent & formed a cylindrical shape. Please see video below when this...... Listed under: [LED Projects](#)

115. [Mini Acoustic Levitation](#) View this project on my website to see a circuit simulation and a video! Acoustic levitation is made possible through the fact that sound behaves as a wave. When two sound waves intersect each other, they can either constructively or destructively interfere with each other. (This is...... Listed under: [Sound – Audio Projects](#)

116. [DIY Floor Cleaning Robot Using Arduino](#) While cleaning, getting to those nasty little unreachable spaces under the beds, tables, and sofas can be a big pain. Though small but smart vacuum cleaners are now out there, who wants to spend more than 500 bucks on them when you can make one...... Listed under: [Robotics – Automation Project Ideas](#)

117. [Arduino Energy Cost Electrical Meter Device](#) Do you pay too much for your electricity bills? Do you want to know how much electricity your kettle or heater consumes? Make your own portable Energy Cost Electrical Meter! Watch how I found the use of this device. Step 1: Preparation. Tools Screws and...... Listed under: [Metering – Instrument Project Ideas](#)

118. [Robotic E-textile](#) Hello! My name is Fiberbot, and I am so happy you are going to be making more of my friends. In this instructables you will learn exactly how to make a robot that looks just like me. I will also let you in on a...... Listed under: [Robotics – Automation Project Ideas](#)

119. [Hey Pillow IoT Alarm](#) Know someone that constantly struggle to get out of bed, comes late to work and you are just want to give them a nudge in the morning. Now you can make your own Hey Pillow. Inside the pillow is embedded with an annoying piezo buzzer...... Listed under: [Clock – Timer Project Ideas](#)

120. [Tchaibotsky (a Piano Playing Robot)](#) This instructable was created in fulfillment of the project requirement of the Makecourse at the University of South Florida (www.makecourse.com) Tchaibotsky is an Arduino powered piano playing robot. The motivation was to build something that could accompany pianists, whether they're missing an arm and can't...... Listed under: [Robotics – Automation Project Ideas](#)

121. [Control Your Model Train Layout With Your Mobile Phone!](#) Controlling a model train layout with a wired throttle and turnout controllers might be a good start for beginners but they pose a problem of non-portability. Also, the wireless controllers which come in the market can either control only some locomotives or are a bit...... Listed under: [Phone Projects](#)

122. [Ultrasound Sensor: 2D Tracking With Arduino](#) Ultrasound ranging is a complicated task that made easy by the readily available module for Arduino. To detect or measure the distance it transmits the signal to the target and target reflects that back. Arduino measure time is taken for complete travel. As the speed...... Listed under: [Sensor – Transducer – Detector Projects](#)
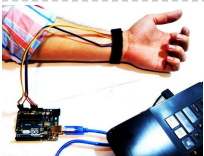
123. [Scrolling Text Display (A to Z Guide)](#) In this instructable / video I will guide you with step by step instructions how to make scrolling text display with Arduino.I won't be explaining how to make code for Arduino, I will show you how to use existing code. What and where you need...... Listed under: [LED Projects](#)

124. [Matrix LED Candle Light](#) Hi, in this instructable you will learn how to build a very long lasting LED-Matrix-Candle. It looks very modern, doesn't smoke 😉 and can be reloaded with your smartphonecharger. The yellow light gives you a very good expression of a real flame. To be exact:...... Listed under: [LED Projects](#)
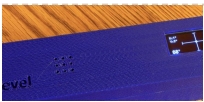
125. [Brushless Motor Thrust Stand](#) Back in the time when I was building my Arduino based Ludwik Drone I faced a problem of c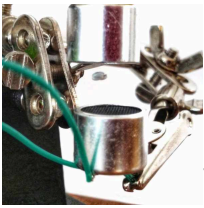hoosing proper motors and propellers. I didn't know anything about drones at that time so I had to trust motor manufacturer and the datasheet of a motor...... Listed under: [Motor Projects](#)

126. [Arduino Polygraph Machine (Lie Detector)](#) In this project, We'll try to get some information from the human body by using simple sensors and Arduino. You can use this information to create a lie detector machine. At the end of this article, you : Know Polygraph and basics of measuring and...... Listed under: [Sensor – Transducer – Detector Projects](#)
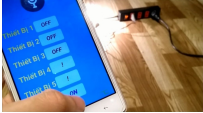
127. [Bloomie-The Interactive Flowers](#) Sometimes words are not enough to share your feelings. That's when you need Bloomie! Bloomie is a product for people to share their emotions through lights. When you trigger a certain interaction, the message will be sent to the other person's Bloomie. By using Bloomie,...... Listed under: [Home Automation Projects](#)
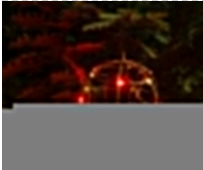
128. [DigiLevel – a Digital Level With Two Axes](#) The inspiration for this instructable is the DIY Digital Spirit Level found here by GreatScottLab. I liked this design, but wanted a bigger display with a more graphical interface. I also wanted better mounting options for the electronics in the case.

129. **Simon & Whack-a-Mole Game Using Arduino (also in Tinkercad)** If you grew up in '80s, most likely you played an electronic toy game called Simon. In this Instructable, I will be building an Arduino kit that you can code to play Simon and other button-based games such as Whack a Mole. I developed this...... Listed under: Game – Entertainment Projects

130. **Controlling Devices With Voice Command Using NodeMCU** I just want to say hello to everybody, this is my first time writing an instructable project. English is not my native language so I will try to make short and as clear as possible. Controlling devices with voice command is not a strange thing...... Listed under: Sound – Audio Projects

131. **Glowing Ornament** Original glowing ornament for your Xmas tree. It's made from brass rods wired by a freeform method and contains 18 glowing LEDs. Step 1: Tools soldering iron solder soldering paste 0.8mm brass rod 18x SMD LED coin battery on/off switch Step 2: The Rings The...... Listed under: LED Projects

132. **Bluetooth Air Horn** As a long time lurker I finally decided this project was worthy of a write up (also I'm killing for an instructables tshirt). I love this site and hope you enjoy this project. IMPORTANT!Just a quick heads up, there are optional steps in this build....... Listed under: Bluetooth Projects

133. **How to Control Home Appliances With TV Remote With Timer Function** Even after 25 years of its introduction to consumer market, infrared communication is still very relevant in recent days. Whether it is your 55 inch 4K television or your car sound system, everything needs an IR remote controller to response to our commands. There are...... Listed under: Clock – Timer Projects

134. **Needle-Felted Pressure Sensor** Create a pressure sensor using: - Needle-felted wool - Thin muslin - Velostat - Conductive thread This sensor can be used an analog input for Arduino code. Step 1: Prepare the Core Components Component 1: A felted wool ball. This can be made using unwoven...... Listed under: Sensor – Transducer – Detector Project Ideas

135. **Arduinoflake – PCB Version** A few weeks ago I made a freeform Arduinoflake. Lot of you loved it. But its magic is not only being freeform but also in the pattern of the LEDs. So I decided to create a PCB version which would be really easy and cheap to...... Listed under: Game – Entertainment Projects
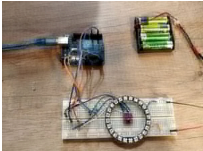
136. **Simulated Sports Scoreboard** I am the theatrical technical director for a local high school. Their winter production was "Disney's High School Musical". During meetings with the director, he said it would be cool if he could have a scoreboard. I excitedly replied that I could make one that...... Listed under: Game – Entertainment Projects
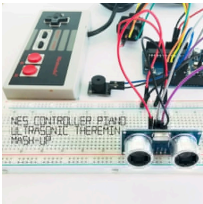
137. **Ciclop 3d Scanner My Way Step by Step** I'm going to realize the famous Ciclop 3D scanner. All the step that are well explained on the original project aren't present. I made some fix to simplify the process, first I print the base, and than I restilize the PCB, but go on. Step 1: Printing and...... Listed under: CNC Machines Projects

138. **Connect 4 Game Using Arduino and Neopixel** Rather than just giving an off-the-shelf toy gift, I wanted to give my nephews a unique gift that they could put together and (hopefully) enjoy. While the Arduino code for this project may be too difficult for them to understand, the basic concepts of input,...... Listed under: Game – Entertainment Projects
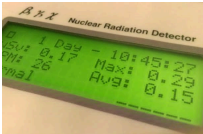
139. **Controlling a Neopixel Led Ring With a Gesture Sensor** In this tutorial we're going to play with a gesture sensor (APDS-9960) and a neopixel ring to learn how to combine them both using an Arduino UNO. The end product will respond to left - right gestures by animating led movement right or left, and...... Listed under: Sensor – Transducer – Detector Projects

140. **NES Controller Piano / Ultrasonic Theremin Mash-Up** I recently built a simple 8 key piano using an original NES controller and Arduino UNO board.Unlike conventional Arduino piano projects which require one digital pin for each key / button the NES controller piano used only three digital pins (D5 for nesClock, D6 for nesLatch, D7...... Listed under: Sound – Audio Projects

141. **RGB One Button USB Keyboard** Ever felt the need to have a tiny, yet functional, RGB backlit keyboard, no bigger than the size of a single key? No? Who cares, make one anyway! This instructable will guide you through the steps you need to make your very own, slightly useless,...... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects

142. **Radioactivity Counter (IoT) and Monitoring Eco-system** C-GM firmware last update on June, 10th 2019 with new 1.3 versionA-GM applicationlast update on Nov, 25th 2019 with new 1.3 version This D.I.Y low cost (50$/43€) C-GM Counter project provides hardware and firmware for building a Geiger-Müller counter device aka G.M. counter for continuous measurement of the radioactivity level. It is based on an Arduino Nano,...... Listed under: Sound – Audio Projects

143. **Bell Model 202 Bluetooth Telephone (1930-2018)** Using the magic of Arduino, I revived an antique Bell model 202 telephone and added Bluetooth capability to it. There are two parts to this. On one end I have an ancient phone from the 1930's. On the other end, I have one of a...... Listed under: Bluetooth Projects

144. **LaserKitty!!** It is a truth universally acknowledged that a single cat in possession of good fortune must be in want of a laser toy. As with single gentlemen in want of future wives, some precautions must be observed. But is that not true of anything really...... Listed under: Other Projects

145. [Use Your NES Controller As On/Off Switch for Lights.](#) Turn your NES controller's START BUTTON into an ON/OFF switch for lights with this Instructable - Other versions I have seen either gut or modify the electronics but in this project the electronics are intact so the controller can be used for retro gaming after the lights go out… I…… Listed under: [LED Projects](#)
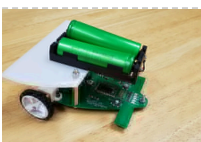
146. [Escape Robot : RC Car for an Escape Game](#) The main purpose of this project was to build a robot that would differentiate itself from already existing robots, and that could be used in a real and innovative area. Based on personal experience, it was decided to build a car-shaped robot that would be…… Listed under: [Robotics – Automation Projects](#)

147. ["Wooden" Desktop Clock *Modern Looking*](#) Hi everyone, this is my second instrucatable! This time we are going to build a wooden clock with temperature and humidity display. Like shown in the picture, our the time will be displayed through the "wood". Since light isn't strong enough to pass a piece of…… Listed under: [Clock – Timer Projects](#)

148. [Spaceship Control Panel – Laser Cut Arduino Toy](#) A few months ago I decided to become a member of the local maker space, since I've been wanting to learn the tools of the maker trade for ages. I had a tiny bit of Arduino experience and a had taken a Fusion-course here on Instructables……. Listed under: [Game – Entertainment Projects](#)

149. [RUMI the LineFollowingRobot](#) I made this project in collaboration with Ruben Says, for our studies in electromechanics at the HoGent. The assignment was to make a line follower robot, which is a little cart that by using its sensors is able to follow a black line on a…… Listed under: [Robotics – Automation Projects](#)

150. [Chord Displaying Smart Guitar](#) I am an Electronics engineer by profession and a guitarist by hobby. I wanted to make a guitar which can itself show the beginner guitarist how to play the chords by displaying it on the fret board. So I decided to modify my acoustic guitar…… Listed under: [Sound – Audio Projects](#)

151. [Brew|LOGIC – Bluetooth Enabled Arduino Brewing Controller](#) Brewing beer has become a worldwide phenomenon. Beer and wine is being crafted in ordinary kitchens in every corner of the world. One phrase that you may hear from your fellow homebrewer is "From Grain to Glass", which refers to the process of making beer…… Listed under: [Bluetooth Projects](#)
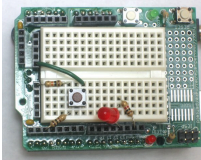
152. [Moving and Talking Giant Lego Hulk MiniFig (10:1 Scale)](#) I've always played with legos as a kid, but I didn't have any of the 'fancy' legos, just classic lego bricks. I'm also a huge fan of the Marvel Cinematic Universe (MCU) and my favourite character is Hulk. So why not combine the two, and…… Listed under: [Robotics – Automation Projects](#)
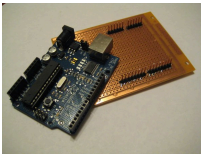
153. [Lego Mini Memory Game](#) A year or so ago, I wrote up an Instructable about installing a bunch of LEDs in a Lego Mini Cooper. The innovation, such as it was, was that the LEDs could be controlled with a smartphone (or through any web browser, for that matter). As I…… Listed under: [Game – Entertainment Projects](#)

154. [Light Sensing LEDs using Arduino](#) I was recently reserching on LEDs and I stumbled upon this page as I read it I found that LEDs are not just used to emit light but the also have the ability to sense light.At first using LED as light sensor sounds complicated but…… Listed under: [Arduino LED Project Ideas](#), [Ideas](#)

155. [Physical Pixel using Arduino](#) This example example uses the Arduino board to receive data from the computer. The Arduino boards turns on an LED when it receives the character 'H', and turns off the LED when it receives the character 'L'. The data can be sent from the Arduino…… Listed under: [LED Projects](#), [Projects](#)

156. [Arduino ProtoShield from Household Items](#) I love my Arduino. It got me into, and hooked on, microcontroller programming. I also like the expandability that shields provide. My Arduino can be a GPS Locator one minute, and be connected to the web the next. There's also a kit that lets you…… Listed under: [How To – DIY – Project Ideas](#), [Ideas](#)

157. [SensoDuino: Turn Your Android Phone into a Wireless Sensors Hub for Arduino](#) UPDATES Nov 23, 2013: SensoDuino 0.160 gets a face left. Nov 19. 2031: OPINION: The Amazing Synergy Between Arduino & Android. Nov 19, 2013: SensoDuino 0.159 is out. Android phone date (y,m,d) and time (h,m,s) are supported as sensors. Support for Android KitKat (4.4/API 19). INTRODUCTION Think of SensoDuino as…… Listed under: [Arduino Android](#), [Internet – Ethernet – LAN Projects](#), [Phone Projects](#), [Sensor – Transducer – Detector Projects](#)

158. [Sleep n' Tweet using an Arduino](#) Now I am lucky enough to work at the greatest company in the world as a University of Waterloo, co-op student. It might not even be a company you've heard of yet. They're named Upverter and we are trying to change the way people design,…… Listed under: [Home Automation Projects](#), [Internet – Ethernet – LAN Projects](#), [Projects](#)
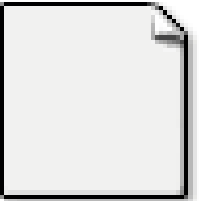
159. [Anti-Sunflower – Points to Your Darkness!](#) Since childhood, I always wanted to try my hands on electronics. Recently I bought the Arduino and started exploring it. In this process, I got to know more about Light Dependent Resistors (LDR). Somehow, I stumble across this idea. Basically, it's an electric sunflower which…… Listed under: [Home Automation Projects](#)
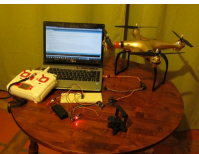
160. **Mint-Sized Success Meter (quit smoking!) with Arduino** There comes a time in life to put childish things behind and give up nasty habits. Some, like smoking, can be damn hard without constant encouragement. It was time for me to combine my favorite hobby with my driving goal and make this: The Quit…… Listed under: Ideas, Medical – Health based Project Ideas, Metering – Instrument Project Ideas

161. **Honey Bee Counter using Arduino** Where the honeybee's division of labor has stayed on a steady progression for 25 million years… our human superorganism has grown more complex and in all directions… hence the bee counter… By: thomashudson.org Live data from - June 25, 2012 I've moved away from live…… Listed under: Game – Entertainment Project Ideas, Ideas

162. **NRF24 Two-Way Radio for Telemetry** Hi guys, my name is Pedro Castelani and I'm bringing you my first instructable: building a two way radio with arduino for, well, whatever you need it for. In this project, we will make two seperate circuits which will act as both reciever and transmitter…… Listed under: Radio Projects

163. **Arduino Snail Mail Notifier** My mailbox is across the street from my house because our mailmen don't walk door-to-door, so I never know when the mail is delivered. Sometimes, I'm waiting for something and I'd really like to know when it arrives. I got my first Arduino last week,…… Listed under: Ideas, Internet – Ethernet – LAN Project Ideas
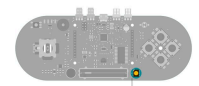
164. **Slipper Shining with LED strip & Xadow** mo.momi Led strips are amazing! Firewalker-led-sneakers(http://learn.adafruit.com/firewalker-led-sneakers) by Adafruit inspired me. I wanna change a way to control it, instead of "pressure-sensitive", I use a accelerometer sensor judging the motion of slipper. It's simple, I complete this version only calculating the acceleration on "z" axis, weather…… Listed under: LED Projects

165. **Arduino CNC Plotter (DRAWING MACHINE)** Hey guys! I Hope you already enjoyed my previous instructable "How to make your own Arduino training platform" and you are ready for a new one, as usual I made this tutorial to guide you step by step while making this kind of super amazing…… Listed under: CNC Machines Projects
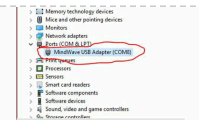
166. **YouTube Desktop Notifier** Do you get nightmares of losing your YouTube Subscribers? If you do, you are not the only one. https://youtu.be/ITl9ToWFHCk Luckily I have made this "YouTube Desktop Notifier" to keep me up-to-date with my channels Subscriber and View Counts. This very simple DIY project cost me…… Listed under: Video – Camera – Imaging Projects
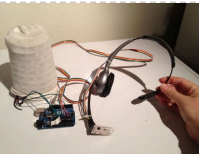
167. **Arduino Esplora Blink Code** This sketch blinks the Esplora's RGB LED. It goes through all three primary colors (red, green, blue), then it combines them for secondary colors(yellow, cyan, magenta), then it turns on all the colors to create white. For best results, cover the LED with a piece…… Listed under: LED Projects, Projects
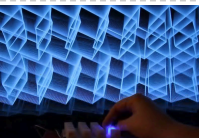
168. **Analog Input using Arduino** A potentiometer is a simple knob that provides a variable resistance, which you can read into the Arduino board as an analog value. In this example, you'll connect a poterntiometer to one of the Arduino's analog inputs to control the rate at which the built-in…… Listed under: Projects, PWM Projects

169. **3 Amazing BRAIN / MIND Control Projects Lights LedStrip LED With Arduino and Neurosky** https://youtu.be/kbzIDT0Aby8 Have you ever wanted to turn the lights ON or OFF just by thinking about it? Or do you want to know how stressed you are by looking at the color of a RGB led? While now you can by following this Instructables! To…… Listed under: LED Projects

170. **Yoga Breathalyzer** The yoga breathalyzer is a breath visualization tool to help you understand and get in touch with your breathing. Breath is the basis of yoga and meditation, and this biofeedback tool is one way to develop a deeper understanding of your own breath. Using Arduino,…… Listed under: Sensor – Transducer – Detector Project Ideas
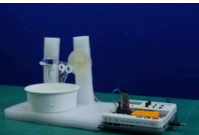
171. **Arduino LED Button Pad That Drives Processing Animations** WhatThis button pad is made using a PCB and other components manufactured by Sparkfun. It is driven by an Arduino Mega. Each button is nice and squishy and satisfying to press, and it has an RGB LED inside! I've been using it to control animations…… Listed under: LED Projects

172. **Sonic Switch: Use a Sonic Screwdriver to turn on your computer!** What it is: An Arduino-based light-sensitive switch for turning on a desktop computer. Why its cool: Use a Sonic Screwdriver to turn on your computer! Story: This project started, as I'm sure a lot of them do, as a result of boredom and the thought…… Listed under: RTOS – OS Projects

173. **Arduino and 7 segment LED display decoder** In this instructable i will explain how to connect 7 segment display, decoder and arduino. It´s pretty easy. At first we have to learn something about decoder. I´m using BCD to 7 segment decoder. My is D147D, this is old chip, but the newer are…… Listed under: LED Projects, Projects

174. **Smartphone Controlled Bubble Blower Using Arduino** Whether you're already a kid or not; you are going to become one as soon you see bubbles floating around you! You'll be lying if you say that you don't pop one on seeing one! Alas, everything isn't the same for the one who's blowing…… Listed under: Phone Projects

project...... Listed under: Calculator Projects
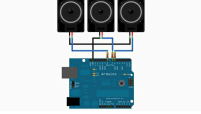
176. Coffee-Art Project Well, hello there! My name is Manou and this is my very first instructable. This instructable is all about making a mechanic arm with an arduino genuino uno! This all started with this basic idea: I wanted to make a robot that made art and...... Listed under: Home Automation Projects

177. Capacitive Touch Arduino Lamp The Problem It is late night, and your cellphone rings. You can't see where it is, you blindly grope around your nightstand, trying in vain to find that illusive switch that will illuminate your side of the bed. You clumsily turn on the lamp, locate...... Listed under: Home Automation Projects, Projects

178. SPlaying tones on Multiple outputs using the tone() function with Arduino This example shows how to use the tone() command to play different notes on multiple outputs. The tone() command works by taking over one of the Atmega's internal timers, setting it to the frequency you want, and using the timer to pulse an output pin....... Listed under: Projects, Sound – Audio Projects

179. Pokemon Elemental Arcade (Mini Game) This project started as I had to create a project for the HKU with an arduino. It had to be something which would be either entertaining or solving a certain problem. For which I chose to pick the entertaining part. In the end combining multiple...... Listed under: Game – Entertainment Projects

180. Button State Change Detection using Arduino Once you've got a pushbutton working, you often want to do some action based on how many times the button is pushed. To do this, you need to know when the button changes state from off to on, and count how many times this change of state...... Listed under: Calculator Projects, Projects

181. Redefining the TV Remote using Arduino We use them every day, but has no one got bored of pressing buttons on a stick, it's far too much effort pressing buttons! Surely there are better ways to control a device? After doing some work with my Nikon camera using IR to control...... Listed under: Home Automation Projects, Projects
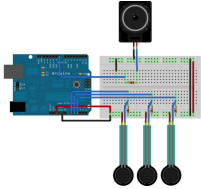
182. Digital Treasure Chest I study Game and Interaction technology at Utrecht University of the Arts. There is one project called "If this then that" where you're asked to build an interactive product. You are to use an Arduino, design an interesting interactive element and build a nice and...... Listed under: LED Projects

183. How to make a Ball Balancing Robot Last year, I have made this ball balancing robot.It can stand on a ball stable by the balance system of itself. There is only one connect point between the robot and the ground, so it is more flexible than the traditional wheeled robot. It can...... Listed under: Robotics – Automation Projects
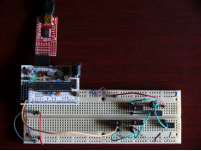
184. Using FM RC Controllers using an Arduino I recently dug up my old RC transmitter and receiver and thought "How can i control my arduino with this?" so i powered on my scope to see what was going on at the receiver. Sure enough, it was sending out the standard PWM signal that servos...... Listed under: Projects, Radio Projects

185. Simple keyboard using the tone() function using Arduino This example shows how to use the tone() command to generate different pitches depending on which sensor is pressed.   Circuit Connect one terminal of your speaker to digital pin 8 through a 100 ohm resistor, and its other terminal to ground. Power your three FSRs (or...... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Projects, Sound – Audio Projects

186. Music Box With Mini Monitor(OLED) and LED My idea was a box that would play music when you open it. It also has a display with an emoji on it that awakes, greeting you. There is also a LED in it that lights up if you hold the Force-sensitive resistor squeezed between...... Listed under: LED Projects, Medical – Health based Project Ideas

187. Accessing 5 buttons through 1 Arduino pin I made the original Instructible that this is based on over a year ago (You can see it here to see some of the theory around how this works:http://www.instructables.com/id/How-to-access-5-buttons-through-1-Arduino-input). To make a long story short, I moved to a different country a few weeks...... Listed under: Ideas, Interfacing(USB – RS232 – I2c -ISP) Project Ideas

188. Web Controlled Arduino LED This instructable shows you how to build a Web-enabled tri-color LED based on an Arduino and the WIZnet Ethernet shield, controllable from any Web browser . Check the live demo at http://try.yaler.net/~arduino/led Because the LED is exposed through a simple RESTful web service running on...... Listed under: Arduino LED Project Ideas, Ideas, Internet – Ethernet – LAN Project Ideas

189. Interactive Glowing Mushrooms https://youtu.be/z1V3YJo0Cwk This instructable will show you how to make mushrooms that will glow in the dark. You can turn individual mushrooms off and on again by pressing the top. I started this project for a school assignment where we had to create something using the...... Listed under: Other Projects

190. Arduino Powered Nixie Tubes: ArduiNIX Nixie driver shield assembly www.ArduiNIX.com presents: ArduiNIX Nixie driver shield assembly The ArduiNIX shield is a user programmable platform for driving multiplexed Nixie tube or other high voltage displays**. The ArduiNIX is open source hardware Welcome to the assembly portion of the site. Here we will take you step by...... Listed under: LED Projects
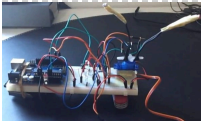
191. LED Show 2 using Arduino Esplora This example shows you how to read different analog sensors to change the brightness of the three colors in the RGB LED. In this example you will read the amplitude from the microphone, the amount of light on the light sensor, and the position of...... Listed under: LED Projects,
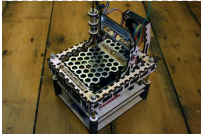
192. [Infinite Disco](#) In this project, I made an infinity mirror based on a dodecahedron that reacts to sound . Step 1: Materials Essential materials: Arduino Uno 3mm thick 100x50cm MDF 2mm thick 100x50cm plexiglass 3 meter WS2812B LEDstrip 60 LEDs/m Sound Detection Sensor Module 3-PIN Thin electric…… Listed under: [LED Projects](#)

193. [Arduino light seeker](#) First of all, I'm from Switzerland so please excuse my english mistakes. Here is one of my first little project I did with my Arduino Uno. It's is just a little light seeker. The servo turns towards the light. Step 1: The wiring Here is…… Listed under: [Ideas](#), [Other Project Ideas](#)
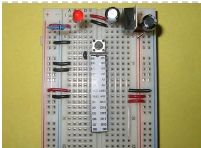
194. [The MicroSlice | A tiny Arduino laser cutter](#) A few years ago I saw an Instructable where Groover had used a pair of DVD-RW drives to make a pocket laser engraver. Inspired by the idea, driven by the recent purchase of a full-sized 50 watt CO2 laser cutter, and roused by the launch of the Microcontroller contest I took…… Listed under: [CNC Machines Projects](#)

195. [Arduino Trumpet](#) This project emulates a trumpet by playing notes using the three buttons (valves). This is easy to make and fun to play with, though it can only play one octave and no sharps/flats. Step 1: Code Load this into your Arduino: int speaker = 9;…… Listed under: [How To – DIY – Project Ideas](#), [Ideas](#)

196. [Wally – IR Detection Robot using Arduino](#) My First ever Robot. It tracks objects using Infra-red sensors, and has basic AI that follows and avoid objects. I will describe the how I made this robot, and upload some videos. Version 1 (16 Dec 2011): —————The components used ————————- I actually planned this…… Listed under: [Projects](#), [Robotics – Automation Projects](#)

197. [Secret Compartment Chess Set](#) I play chess pretty poorly and have always wanted to get better, but I don't even own a chess set. I decided I wanted to make my own set, but with a twist. I have made a chess board with a secret drawer that is…… Listed under: [Game – Entertainment Projects](#)

198. [Arduino Projects on a breadboard (no serial com)](#) Intro: If you've got an Arduino Uno and want to start duplicating projects without having to buy an Uno every time… get ready to live! This instructable will show you how to move your projects (that do not require serial communication) onto a breadboard for…… Listed under: [Development Board – Kits Projects](#), [Interfacing(USB – RS232 – I2c -ISP) Project Ideas](#)
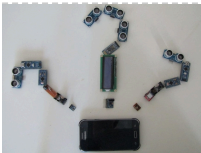
199. [Arduino Prototyping Shield on the cheap](#) Breadboards are very handy, but sometimes I just want to connect one IC or some LEDs and resistors to the controller. My simple solution was to canibalize a cheap Breadboard to get two expandable PrototypingShields with some additional features. What I used: Breadboard (~3$) 2…… Listed under: [Development Board – Kits Project Ideas](#), [Ideas](#)

200. [Clapper LED Candle](#) Three years ago I saw "My New Flame" by MORITZ WALDEMEYER, INGO MAURER UND TEAM 2012 at the museum gift shop, and feel in love with the idea. I hoped to recreate something mesmerizing, enjoyable, functional and interesting to watch, but with a slight twist. I certainly couldn't…… Listed under: [LED Projects](#)

201. [Automatic Camera Shutter Switch](#) The best part of haunted houses and amusement park rides is getting to see pictures of your friends screaming in terror. To get these kinds of pictures requires perfect timing. The best way to get this is with an electronic control circuit. So in this…… Listed under: [Video – Camera – Imaging Projects](#)

202. [Interfacing Any Arduino With a Cellphone](#) When using an Arduino, it may result quite annoying to not be able to use it just because you do not have a computer available. Maybe the Windows or Mac OS isn't compatible, you don't have any computer at all or you just want more…… Listed under: [Phone Projects](#)

203. [No-Solder Arduino Breadboard Shield](#) The goal of this instructable is to make a no solder arduino breadboard shield like this one: Step 1: You will need Parts list: Super glue*Mini breadboard size 4.5x3.5 cmArduino pin headers** * Hot glue wont cut it** Normal female pin headers can also…… Listed under: [Development Board – Kits Project Ideas](#), [Ideas](#)

204. [Tweety Button using Arduino](#) Welcome to my first Instructable! This is for something I've coined the "Tweety" or, Tweety-Button. The concept is simple, you're on your computer and the inspiration to Tweet is welling up inside. Chrome is being slow today, and you want to get those 140 characters…… Listed under: [Ideas](#), [Radio Project Ideas](#)

205. [Solar Powered WiFi Weather Station V2.0](#) This Instructable is a continuation of my earlier weather station project. It was quite popular on the web, people around the globe made their own by following it and given valuable feedback for improvement. By taking consideration of the comments and Q&A section of my earlier project,…… Listed under: [Solar energy project Ideas](#)
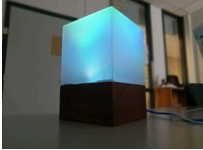
206. [Timelapse Panning controller for GoPro Cameras](#) This instructible will show you how I built (and you can also build) an Arduino Timelapse Panning controller for GoPro cameras. There are obviously some refinements that can be made to the design, but in general I am very happy with the results that I've…… Listed under: [Video – Camera – Imaging Projects](#)

207.   [Wii Nunchuck as general purpose controller via Arduino board](#) Background: I made a self-balancing electric skateboard which is steered using a Wii Nunchuck by either using the thumb joystick on the top or by tilting it left or right, depending on which of the two buttons on the end are being pressed. A simplified...... Listed under: [Ideas](#), [Other Project Ideas](#)

208.   [Interactive Touchless Light](#) Hi everyone! I'd like to share the project I have been working on here. I got inspired to experiment with capacitive touch sensing through a project in my university. I found out about this technology through instructables and used the things I learned here and...... Listed under: [LED Projects](#)

209.   [High-Low Binary LED Arduino Game](#) This is a pretty simple game: The Arduino shows a number in binary on the green LEDs. You then guess whether your green number is bigger than the computer's number. The Arduino shows its number on the red LEDs. If you were right, you will...... Listed under: [Arduino LED Project Ideas](#), [Ideas](#)

210.   [Pong Playing Flexible Screen on a Shirt](#) This is my Halloween costume for the year 2013. It's been in the works for about a year and has taken quite a few man hours to create. The screen is 14 by 15 pixels, so, pretty low resolution but it can still do some...... Listed under: [Game – Entertainment Projects](#), [Home Automation Projects](#), [LED Projects](#)
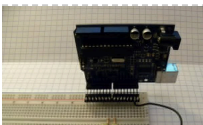
211.   [Arduino Flash game streamer](#) its a simple project that uses the a ethernet shield server to give a advanst web page with flash games on it. Step 2: The code::: you can download this code at the end: load up the ethernet server example and delete the code for...... Listed under: [Game – Entertainment Project Ideas](#), [Ideas](#)
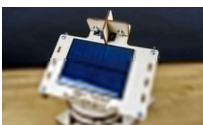
212.   [Handheld Gaming Console | Arduboy Clone](#) A few months ago I came across Arduboy which according to its official website is a miniature 8-bit game platform that makes it easy to learn, share and play games online. It is an open source platform. The games for the Arduboy are made by the users....... Listed under: [Game – Entertainment Projects](#)
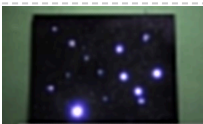
213.   [Arduino Bracket](#) When you are tinkering around with your Arduino and a breadboard you might want to make yourself an "Arduino Bracket". Nothing more than header pins and a piece of wire, the "Arduino Bracket" keeps wiring neat and tidy, and lets you easily disconnect your Arduino...... Listed under: [Ideas](#), [Interfacing(USB – RS232 – I2c -ISP) Project Ideas](#)

214.   [Dual Axis Tracker V2.0](#) Way back in the year 2015 we designed a Simple Dual Axis Tracker for use as a fun student or hobby project. It was small, noisy, a little complicated, and provoked a lot of really weird community comments. That being said, three and a half years later...... Listed under: [Security – Safety Projects](#)

215.   [Sky on the Wall (Mood Lighting-IR remote)](#) I love LED and stars, and after saw another instructables about star constellation and some mood lighting that was very inspired and I decided I wanted to take that idea and want to create some mood lighting with some skies component such as stars, and...... Listed under: [Home Automation Projects](#), [LED Projects](#)

216.   [3x3x3 LED PVC Light Cube using Arduino](#) This 3X3X3 ft. LED PVC cube is the ultimate in mood light fun!   An LED (light emitting diode) will burn longer than traditional bulbs so that you can enjoy your giant light for a LONG LONG time. Build it and see! Step 1: WARNING!!! THIS PROJECT...... Listed under: [Arduino LED Project Ideas](#), [Game – Entertainment Project Ideas](#), [Ideas](#)

217.   [Punch Activated Mario Question Block Lamp](#) The Super Mario games were my childhood. I've always wanted to have some of the props in the games, and now that I have the tools to do it, I decided to start making them. The first up of that on my list is the...... Listed under: [LED Projects](#)

218.   [Frameless Laser Harp](#) We are a generation that love sound and light – can't do without them really. Our most preferred time of day is night, or what we would call evening. We are particularly well acquainted with technology; doesn't hurt these days. Our prerequisite for everything is...... Listed under: [Game – Entertainment Project Ideas](#), [LED Projects](#)

219.   [Battery Reconditioner using an Arduino](#) So if you are like this Lazy Old Geek, you have a lot of rechargeable batteries lying around. I wrote another Instructable with some battery tips. http://www.instructables.com/id/Rechargeable-Battery-Tips/ Amongst these batteries, I have a lot that no longer work or don't work very well. So I...... Listed under: [Battery Projects](#), [Projects](#)

220.   [Pitch follower using the tone() function using Arduino](#) This example shows how to use the tone() command to generate a pitch that follows the values of an analog input Circuit image developed using Fritzing. For more circuit examples, see the Fritzing project page Connect one terminal of your speaker to digital pin 9 through a...... Listed under: [Projects](#), [Sound – Audio Projects](#)

221.   [Arduino Chessclock](#) I could not find instructions on a good Arduino chess clock so instead I built my own which I will describe here. Step 1: Parts list [box color="#985D00" bg="#FFF8CB" font="verdana" fontsize="14 " radius="20 " border="#985D12" float="right" head="Major Components in Project" headbg="#FFEB70" headcolor="#985D00"] here are the...... Listed under: [Clock – Timer Projects](#), [Game – Entertainment Projects](#)

[Car Projects](#)
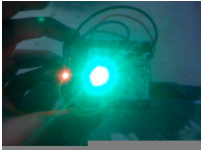
223. [Laser Triggered Countdown](#) This is a simple arduino based project that consists of a laser tripwire that, when triggered, will begin a countdown sequence on red, orange and green LEDs. I designed this to be an easy project for someone learning how arduinos work (like me). This is...... Listed under: [Calculator Projects](#), [LED Projects](#)
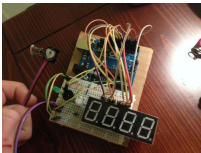
224. [Smart Heart Monitor](#) No longer will you have to pay hundreds of dollars for a heart rate monitor! The Smart Heart Monitor will be able to do all of your cardiac measuring needs for you! The Smart Heart Monitor measures the user's heartbeat using an LED and a...... Listed under: [Medical – Health based Projects](#)

225. [ESP8266 VGA Pong](#) In this Instructables I will show how to build a reproduction of the the classic game Pong for a VGA monitor, using a ESP8266 and few other components. This game is made possible by the EspVGAx library recently published on GitHub by Sandro Maffiodo (aka Smaffer) and, as far as I know, this is the first...... Listed under: [Game – Entertainment Projects](#)
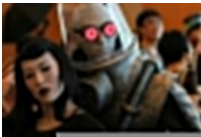
226. [Functional Lit Costume Goggles for Mr Freeze](#) Egads! LED Goggles you can see through (surprisingly well, too)! They pulse subtly, making them so cold and dehumanizing. They were totally perfect for the character I was going after - Mr Freeze. It was my first time really playing with LEDs and Arduinos, so...... Listed under: [Game – Entertainment Projects](#), [LED Projects](#)
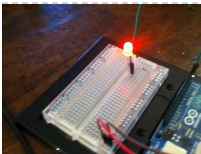
227. [Basic Arduino Tutorials : 01 Blinking LED](#) In this instructable, I'm going to show you how to make a simple circuit/code with an arduino, which will make an LED connected to it flash from off to on, with 1-second intervals, as shown below. This is a very easy, basic idea, however it...... Listed under: [LED Projects](#)

228. [WIRE CUTTING MACHINE](#) Hello friends I have made a Automatic wire cutting machine using Arduino nano controller board. Basically there are 3 process level of this machine like 1) first process is Input Input like wire length and wire quantity provided by pressing push button also the real...... Listed under: [Motor Projects](#)
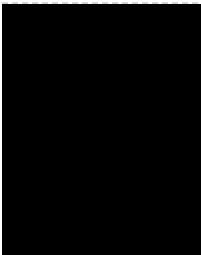
229. [How to make a runaway cookie box using Arduino](#) Eat too many cookies? These are some guidelines for how you can add a few security features to an ordinary box of cookies - or at least have a fun toy. The runaway cookie box will roll away when objects approach it and sound an...... Listed under: [Game – Entertainment Project Ideas](#), [Ideas](#)

230. [Phone Controlled Mood Lighting](#) Dorm rooms are notorious for their dreadful lighting, so I wanted to make a cool alternative light source for my room at school. I made it phone controlled so there would be an easy and wireless way to change the color of the lighting. The...... Listed under: [LED Projects](#), [Phone Projects](#)

231. [Smartphone Controlled RC Car Using Arduino](#) This Instructable shows how to make a Smartphone controlled Arduino Robot Car. Update on 25th Oct 2016 Step 1: Youtube Video Link https://youtu.be/cC2crT941wQ Step 2: Parts and Tools Required 1. 4WD Robot Chassis kit2. Arduino Uno 3. LM298 H bridge Module 4. Bluetooth Module HC-05...... Listed under: [Phone Projects](#)

232. [The Twittering Office Chair using Arduino](#) The Twittering office chair "tweets" (posts a Twitter update) upon the detection of natural gas such as that produced by human flatulence. This is part of my commitment to accurately document and share my life as it happens. For more in depth theory, please see...... Listed under: [How To – DIY – Project Ideas](#), [Ideas](#)

233. [Arduino controlled automated blinds with Web UI](#) This instructable is a detailed guide on how to build an automated controller to run a motor that can operate the opening and closing of blinds. The controller enables the blinds to open and close based on a schedule, room temperature and out door luminosity....... Listed under: [Ideas](#), [Internet – Ethernet – LAN Project Ideas](#)

234. [Sensor Stations Network for Lighting and Security Control](#) With this sensor stations network configured in a master/slave mode, you will be able to do lighting and security control in your home. These sensor stations (Node01, Node02 in this project) are connected to a master station (Node00) connected to your local wifi network. I...... Listed under: [Security – Safety Projects](#)
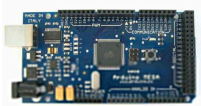
235. [Fix a fried Arduino Mega](#) Sometimes you may do something stupid, other times it is totally inexplicable but as a result of whatever events, the green power light on your Arduino stopped coming on. In my case it turned out to be a burned out voltage regulator. This inscrutable is...... Listed under: [Ideas](#), [Interfacing(USB – RS232 – I2c -ISP) Project Ideas](#)

236. [RGB Temperature Indicator (with XinaBox)](#) This is officially my first Instructables article, so I'm going to admit that I am using this opportunity right now to try it out. Get a feel of how the platform works, the whole user experience side of it. But while I am doing that,...... Listed under: [Temperature Measurement Project Ideas](#)

237. [Accelerometer Dice with 123D Circuits](#) This is the project that got Autodesk's CEO Carl Bass a little extra attention from the TSA on his way to MakerFaire Tokyo.
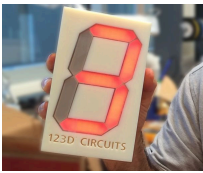
238. **Temperature-controlled USB fan using Arduino** As summer is coming, I bought a USB fan from HuaQiangBei, Shenzhen. However, when I focus myself on work(or game), I could hardly notice its existence. If I can teach it how to think and execute its duty without my order, that will be more...... Listed under: Ideas, Interfacing(USB – RS232 – I2c -ISP) Project Ideas, Temperature Measurement Project Ideas

239. **LED Jigsaw Puzzle Light (Acrylic Laser Cut)** I have always enjoyed the various acrylic laser-cut night lights that others have made. Thinking more about these I thought that it would be great if the night light could also double as a form of entertainment. With this is mind I decided to create...... Listed under: LED Projects

240. **Time Delay Lock Box** Note from the author: In an effort to get this ready in time for the safe and secure challenge, I have had to make a few compromises to my box, but that doesn't mean you have to! I have left my original ambitions in the...... Listed under: Clock – Timer Projects

241. **Better LED as light sensor** As a result of the questions from lekirst on this ible of my hand: LED-as-lightsensor-on-the-arduino/ and the cleaner code made by hansc44 at: Arduino-Use-LED-as-a-light-sensor/ it was time to come with a better Ible. So here it is. (I didn't solve lekirst's problems yet so she probably is open for suggestions) What is...... Listed under: LED Projects, Sensor – Transducer – Detector Projects
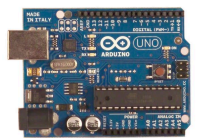
242. **Arduino Mega-ISP Shield** Use this shield to re-burn the bootloader for any arduino. You can always make one on a breadboard, but having a shield is great. This is great for people who works with lots of arduinos. You can also use it with AVRDUDE. I will have...... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Projects

243. **Eye Guardian: Sound Triggered Eye Protection** Eye Guardian is an Arduino powered, High-Decibel continuous sound triggered eye protection wear. It detects heavy equipment sound and lowers protective eye goggles while the equipment is in use. Outline In the first step, I will explain the Inspiration&Idea behind this project. Next, I will...... Listed under: Sound – Audio Project Ideas

244. **DIY Mario Kart Balloon Battle Robots** There are some projects where you make a functional thing or practical thing. There are some projects where you make a beautiful thing. And then there are projects like this where you decide to slap a razor blade and balloon on some robots and battle...... Listed under: Robotics – Automation Projects

245. **5X5 dot matrix on Arduino** With this you just type the text you want on your computer and your 5x5 dot matrix shows the message. Used: ~25 leds ~Arduino uno ~5x 100ohm resistor ~and a bit of skripting It took me a while to figure this all out but in...... Listed under: LED Projects, Projects

246. **Arduino Noise Machine Jacket** As a project for one of my college classes, we were asked to create something using the Arduino. After a few different ideas, I settled on putting an Arduino noise machine into a suit jacket. It uses parts of the jacket to make function, so...... Listed under: Home Automation Project Ideas, Ideas, Sound – Audio Project Ideas
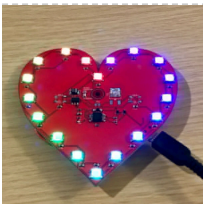
247. **Valentines PCB Heart** With Valentines Day approaching I thought it would be nice to make a project for the people who are special in my life; I thought the people of instructables would probably like it too! I've designed a ~100mm x 100mm or ~4in x 4in PCB...... Listed under: LED Projects
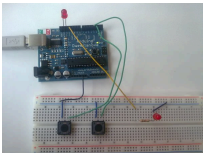
248. **Input Pullup Serial using Arduino** This example demonstrates the use of INPUT_PULLUP with pinMode(). It monitors the state of a switch by establishingserial communication between your Arduino and your computer over USB. Additionally, when the input is HIGH, the onboard LED attached to pin 13 will turn on; when LOW, the...... Listed under: Interfacing(USB – RS232 – I2c -ISP) Project Ideas, Projects

249. **The Ultimate Light Switch** The goal of this instructable is to explain how I made a wifi-connected light switch (also called remotes further). The goal of these remotes is to turn on and off several wifi-connected relays. The relays are not explained in this instructable. They are explained in...... Listed under: LED Projects

250. **Self Sufficient Arduino Board** This is a self sufficient Arduino board, which is powered by harnessing solar power and using a 9V rechargeable battery. It is perfect for anyone who is interested in doing Arduino projects that do not require a computer or any power supply. You can take...... Listed under: Development Board – Kits Project Ideas, Ideas

251. **Arduino PMW enabled high power shield or non-shield on the cheap** Micro controllers are great, but have you ever wanted to control something bigger then, lets say an LED? If you have, look no further (unless you want more then 0.6Amps for 4 channels, or 2.4Amps for 1 channel), unless you don't mind spending more money....... Listed under: PWM Projects

252. **Joy Slippers Version 2 using Arduino** These slippers have 4 analog pressure sensors embedded. They can be used to feed Up, Down, Left and Right values into your computer replacing your mouse, joystick... Visit the JoySlippers website >> http://www.joyslippers.plusea.at/ This Instructable improves upon the previous version http://www.instructables.com/id/Joy-Slippers/. It will show you...... Listed under: Game – Entertainment Project Ideas, Ideas

adds more plot options and i2c_ClearBus, adds GT832E_01 support Introduction...... Listed under: [Arduino Programmer Projects](#)
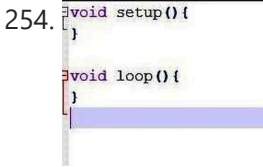
254. [LOG Arduino Sketches 101](#) So this Lazy Old Geek (LOG) gets bored sometimes and wants something to do. Actually, sometimes I get tired of trying to solve hardware problems, which are sometimes software problems. So I decided to do a tutorial on Arduino sketches. What is a Sketch? I'm...... Listed under: [Arduino Programmer Projects](#)

255. [Arduino Controlled Bell Tower or Carillon](#) This is a set of musical bells which are driven by solenoids and controlled by an Arduino microcontroller. There are 8 bells covering one octave. The bells are controllable from a PC, or the tower can stand alone and play pre-programmed melodies. Check out the...... Listed under: [Ideas](#), [Sound – Audio Project Ideas](#)

256. [RGB Backlight + MSGEQ7 Audio Visualizer](#) Welcome to my Instructables on how to build a RGB LED backlight for e.g. the back of your TV or desk. The Schematic itself is very simple since the WS2812 LED Strips are very easy to interface with e.g an Arduino Nano. Note: that you do not have to use the...... Listed under: [Sound – Audio Project Ideas](#)

257. [Arduino All-in-One Getting Started Guide](#) An all-in-one tutorial to getting started with the Arduino open-source electronics prototyping platform. This guide is meant for the beginner but should be also be useful to you if you already tinker with electronics but want to get started with the Arduino. I'll cover: -...... Listed under: [How To – DIY – Project Ideas](#), [Ideas](#)

258. [DIY Cycle Speedometer](#) This project came to my mind when doing my MEM (Mechanical Engineering Measurement) project, a subject in my B.tech. The idea is to measure the angular velocity of my bicycle's wheel. Thus knowing the diameter and the all time mathematical legend the pi(3.14) the speed can be...... Listed under: [Metering – Instrument Projects](#)

259. [Occupational Therapy Dexterity/Cognitive Aid](#) The Need: Occupational Therapy Device Occupational therapy is used in treating Traumatic Brain Injury during many phases of recovery and rehabilitation. As the patient's condition improves, occupational therapy helps them regain skills ranging from basic self-care, to complex cognitive skills such as memory and problem solving. Occupational therapy can...... Listed under: [Medical – Health based Projects](#)

260. [How To Make Two Daft Punk Outfits with Helmets using Arduino](#) For my 30th Birthday I decided to have a D-Themed costume party, my girlfriend Kylie and I decided that we would go as Daft Punk. The costumes were quite involved to make, but we had lots of fun and they looked great! We used a...... Listed under: [How To – DIY – Project Ideas](#), [Ideas](#)

261. [Ever Blooming Mechanical Tulip](#) Everlasting flower for your everlasting love. A perfect not-only Valentine's day gift to your loved one. This mechanical tulip will bloom into any color possible with just gentle touch of your hand. Its six petals will slowly open and light up. When petals are closed...... Listed under: [Development Board – Kits Projects](#)

262. [Charlieplexed row of LED lights, for the Arduino](#) This is my instructable on charlieplexing a LED row/string with the arduino. I noticed that there weren't many instructables on charlieplexing using an arduino, so i made this. I tried to keep the project simple, but that didn't work very well. The soldering is complex,...... Listed under: [Arduino LED Project Ideas](#), [Ideas](#)
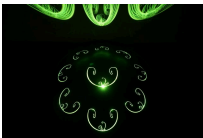
263. [Rav Vast LED Drum Light](#) This project is a small, battery-powered LED ring that fits perfectly inside of your Rav Vast drum. It uses color-changing RGB LEDs and a microphone that allows you to change the color or pattern with changes in volume. You don't need any special skills for the construction...... Listed under: [LED Projects](#)

264. [Core2duino Updated with Arduino](#) This instructable will show you how to build an Arduino shield that adds another Atmega168/328 on top of your Arduino, giving you an extra complete set of I/O pins to use. That's 12 PWM pins, 12 Analog pins, 4 external interrupts, or 40 Digital pins...... Listed under: [Ideas](#), [Interfacing(USB – RS232 – I2c -ISP) Project Ideas](#)

265. [Bike taillight with a twist using Arduino](#) Let's face it. Taillights are boring. At best they go 'blink blink - look at me! I'm blinking - woohoo' all the time. And they're always red. Very creative. We can do better than that, maybe not much, but still better than just 'blink blink'....... Listed under: [Arduino Car Project Ideas](#), [Ideas](#)

266. [Mounting a Smapler v0002 step by step](#) A Smapler is a circuit dedicated to the production of generative sound created by David Cuartielles and Ino Schlaucher from BlushingBoy.org. The Smapler v0002 -aka Singapore edition- is nothing but an Arduino shield to be used for playing funky stereo sounds. As an extra add-on...... Listed under: [Development Board – Kits Projects](#)

267. [Multicolour LED Icosahedron](#) A while ago I made a large 20 sided Die. Numerous people wanted me to build them one and since the most difficult part of the project was getting the cutting angles just right, I decided to make another which would allow for more accurate assembly....... Listed under: [LED Projects](#)

268. [How-to build MACKRA a serb variant using Arduino](#) Project MACKRA was started after I saw the many problems with pre-built robotic platforms e.g. size, programability, mobility, need for batteries,PRICE, and most being dedicated to a single microcontroller. the goals of the MACKRA project were to do the following: 1.create a cheap, and easy...... Listed under: [Ideas](#), [Robotics – Automation Project Ideas](#)

269. [Arduino holder](#) Good news, everyone! I just started with the arduino and right at the very beginning I felt that I needed some sort of base to put the arduino on. I was reading one article from ladyada (http://www.ladyada.net/images/arduino/bumperplace.jpg) and she was using some rubber bumpers on…… Listed under: [Ideas](#), [Interfacing(USB – RS232 – I2c -ISP) Project Ideas](#)

270. [Tide and Weather Clock](#) Although you can buy analog tide clocks that have a single hand indicating whether the tide is high or low or somewhere in between, what I wanted was something that would tell me at what time low tide will be. I wanted something I could glance at…… Listed under: [Clock – Timer Projects](#)
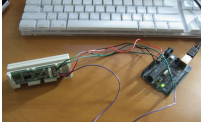
271. [Poduino Case](#) The 'Poduino Case'. A protective case for your Arduino (with breadboard work area): I just received my Arduino Duemilanove and breadboard today. After some careful thought, I realized there is no way this thing could possibly survive daily life on my desk. I saw some…… Listed under: [Development Board – Kits Projects](#)
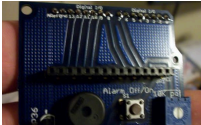
272. [Ardu-pong! the Arduino based pong console](#) A while back the instructables robot made a post on Facebook about some guys who played pong on an Arduino (http://wayneandlayne.com/projects/video-game-shield/games/#pong) but after looking around, i saw that everyone who did this was only worried about making it work. and often resulted as a very hard…… Listed under: [Game – Entertainment Project Ideas](#), [Ideas](#)

273. [Arduino magnetic stripe decoder](#) This instructable shows how to use some freely available code, an arduino, and a standard magnetic stripe reader to scan and display the data stored on magnetic stripe cards such as credit cards, student IDs, etc. I was inspired to post this after reading the…… Listed under: [Ideas](#), [Other Project Ideas](#)

274. [LCD Temperature Shield Assembly Instuctions](#) These are assembly instructions for the LCD Temperate Shield with buzzer that i am going to be selling soon. Please note, all the photos are my own, but are of one of my Prototype stage boards, and are subject to change, the production boards WILL…… Listed under: [LCD Projects](#)

275. [Use the STONE touch screen to make a music player Project introduction](#) I've had an AC692N developer board at home for a long time, and now I want to make a music player that works with the STONE serial touch screen. The following functions need to be implemented: 1. Play MP3 files in the USB flash drive…… Listed under: [Sound – Audio Project Ideas](#)

276. [Catching Your Breath](#) We are nation of obsessive counters: of pulse, steps, followers and calories. Most of these numbers mean little as physiology cannot be reduced to these metrics. But we try and I wondered how do we count a breath? Remember the cinematic days before hospital demise…… Listed under: [Medical – Health based Projects](#)
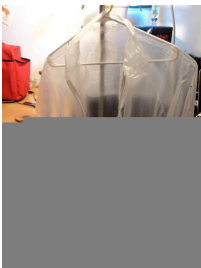
277. [Steampunk Compass using Arduinio](#) Having built a few puzzle box games recently, and having some components left over I thought I would build a functional Steampunk Compass. Based around a Arduino Duemilanove this is a really quick and simple build. Taking reading from a digital compass the Arduino controls…… Listed under: [Clock – Timer Project Ideas](#), [Game – Entertainment Project Ideas](#), [Ideas](#)

278. [EARTH SAVER: Autonomous Material Sorter using Arduino](#) This Arduino project was part of an Association of Mechanical Engineers (ASME) contest to create an Autonomous Material Sorter. The sorter was to sort four glass bottles, four plastic bottles, four Tin cans, and four Aluminum cans. There were requirements such as size of the…… Listed under: [Ideas](#), [Other Project Ideas](#)

279. [Light and Water Reactive Raincoat](#) This semester at college, I am in a class called Computing and Craft which is about incorporating circuitry and micro-controllers and craft to bring our projects to the next level. For our first big project, I decided to make a raincoat the reacted to light and water……. Listed under: [Home Automation Project Ideas](#), [Security – Safety Projects](#)

280. [Dutch 8×8 Word Clock](#) I know that I am not the first to make a word clock, using an Arduino. Still it was always something on my 'to do' list to make a Dutch one. For a different project I've bought a 'colorduino / rainbowduino / funduino' a long…… Listed under: [Clock – Timer Projects](#)

281. [Simple Arduino Traffic Lights](#) Have you ever made a city out of Legos? I know i have built many of them but they all missed something… Traffic lights! So i decided to make my very own traffic light setup from my arduino board. Step 2: Get the components I…… Listed under: [Arduino Car Project Ideas](#), [Ideas](#)
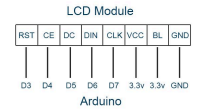
282. [Arduino 101](#) To get started with Arduino, you'll need some basics. In this tutorial, we'll go beyond a little blinky light and teach you about: Variables Input and Output pins Sensors and reading data Mapping results Functions In another tutorial, I'll cover classes and why we might…… Listed under: [Arduino Programmer Projects](#)
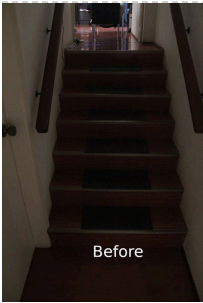
284. [VORONOI HEART LAMP](#) Hi makers, we are here again with a beautiful and stylish lamp Project. VORONOI HEART LAMP. In this project, we benefited from epoxy resin material and 3D printer. https://youtu.be/0SoN9cphUrI Step 1: What Is VORONOI ? In mathematics, a Voronoi diagram is a partitioning of a...... Listed under: [LED Projects](#)

285. [Getting your Nokia 5110 LCD up and running on an Arduino](#) We purchased one of these very cheap, very cool 84×84 LCD backlit screens off of eBay a couple of weeks ago. It's a very nice product for adding visual elements to your projects at a very low price. We paid £3.89 for the screen and...... Listed under: [Electronics News Updates](#), [Phone Projects](#)

286. [Motion Activated Automatic LED Stair Lighting With Arduino](#) I built this Arduino based automatic LED light controller for a set of poorly lit stairs in our new home. The stairs are quite dangerous - especially at night - but not any more thanks to the Motion Activated Automatic LED Stair Lighting with Arduino...... Listed under: [LED Projects](#)

287. [Hidden light control using Arduino](#) I've bought recently some cheap dual axis magnetic sensors at SureElectronics (http://www.sureelectronics.net/goods.php?id=944), I've tried first to use them as straight compass. Annoying problem : it's impossible to accurately compensate the tilt of the sensor without using a gyro sensor. On the other end, if you stay on...... Listed under: [Home Automation Projects](#), [LED Projects](#), [Projects](#)
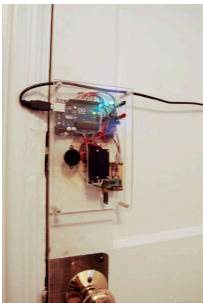
288. [Arduino Powered Mushroom Environment Control](#) This is my first Arduino project aimed at helping me with my other hobby which is growing oyster and shiitake mushrooms indoors. In a nutshell, the controller takes in two temperature readings, 1 Humidity reading and 1 Co2 reading and triggers a set of four...... Listed under: [Projects](#), [Temperature Measurement Projects](#)

289. [Motion Control Slider for Time Lapse Rail](#) This instructable explains how to motorize a time lapse rail using a step motor driven by an Arduino. We will mainly focus on the Motion Controller that drives the step motor assuming you already have a rail you want to motorize. For example when dismantling a machine...... Listed under: [Motor Projects](#)

290. [Diorama, Bat in the cave using Arduino](#) The purpose of this instructable is to outline our development of this bat in the cave as well as provide instructions and tips for future engineers hoping to complete a similar project or use components of our project in theirs. The goal of this project...... Listed under: [Motor Projects](#), [Sensor – Transducer – Detector Projects](#)

291. [Keyfob Deadbolt using an Arduino Board](#) The key to my apartment never worked quite right because it is a copy of a copy of a copy. I am fairly certain that the dead bolt is original to the building and the property manager seems to have lost the original key years...... Listed under: [Home Automation Projects](#), [Projects](#)
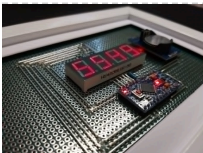
292. [LED Candle – Lights, Flickers, Blows Out, Smokes, and Smells](#) About This Candle & How to Read This Instructable Here's my take on a LED candle that offers the full experience of a real candle. Start to finish. Be sure to watch the YouTube video below! Background: I bought my first Arduino about 3 years ago with...... Listed under: [LED Projects](#)

293. [Arduino Frequency Detection](#) As a follow up to the Arduino Audio Input tutorial that I posted last week, I wrote a sketch which analyzes a signal coming into the Arduino's analog input and determines the frequency. The code uses a sampling rate of 38.5kHz and is generalized for...... Listed under: [Sensor – Transducer – Detector Project Ideas](#), [Sound – Audio Project Ideas](#)

294. [Clock, Amplifier and a Little Amount of Wood...](#) The beginning of the project came from an idea, an inspiration from a video posted on the Internet on the YouTube channel "I like to do things" ... Then came the need to make a stand for one of my monitors that housed a clock,...... Listed under: [Clock – Timer Projects](#)
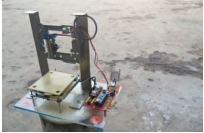
295. [Arduino LifeClock](#) This unique clock reminds you to appreciate every single day, by displaying your current age in days (or weeks) on a seven segment display. Step 1: You Will Need Electronics: Arduino Pro Mini 5V (or any other arduino with >= 12 GPIO Pins) 4 Digit...... Listed under: [Clock – Timer Projects](#)

296. [HRV (Home Air Exchanger) Arduino Controller With Air Economizer](#) HRV Arduino Controller with Air Economizer So my history with this project is I live in Minnesota and my circuit board fried on my LifeBreath 155Max HRV. I didn't want to pay the $200 for a new one. I always wanted something with an air...... Listed under: [Home Automation Projects](#)
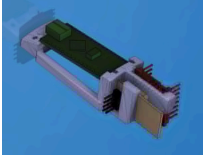
297. [DIY Cheap and Sturdy Laser Engraver.](#) In this instructables I will show you how I made my own DIY laser engraver for very cheap. Also most of the parts are either salvaged from old things or are very cheap. This is a very interesting project for any electronics hobbyist. This engraver...... Listed under: [LED Projects](#)

298. [Wireless Bell System](#) The problem that fix this project is the following: at the high school where I work, the class-change bell doesn´t sound loud enough everywhere and sometimes it causes some problems. Install a new wired class-change bells or buy a wireless bell system isn´t possible by...... Listed under: [Wireless Projects](#)

299. [Dutch 8×8 Neopixel Word Clock](#) A friend introduced me to neopixels (WS2812) programmable LED's. That would be great for my word clock, so I re-did the clock. It is very much a mixup with a slightly different size and code. The 8x8 WS2812 modules are also cheaper than the colorduino,...... Listed under: [Clock – Timer Projects](#)
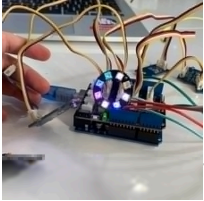
300. [Portal 2 Turret – Master Turret Control](#) This project is an extension or remix of my original Portal Turret on Instructables (Portal-2-Turret-Gun). It can also be used as a cheap controller to control anything that uses the nRF24L01 radio chip. The LCD screen is particularly useful when customizing. https://youtu.be/8gPdsQ2TPBI (It turns out...... Listed under: [Metering – Instrument Projects](#)

301. [Cooperative Multitasking on Arduino – With Pretty Blinky Lights!](#) In my first Instructable Motion Activated Automatic LED Stair Lights with Arduino I mentioned the use of "Cooperative Multitasking". So what is it and why is it helpful? This Instructable attempts to answer the "what is it" and "why is it helpful" question with a simple example...... Listed under: [Other Projects](#)
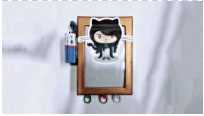
302. [Ring of Fire [REMIX]](#) https://youtu.be/KemcS6kQ0rk After building some of these: https://www.instructables.com/id/Matrix-LED-Light/ i've decided to bring the candle onto another level. While the first one looks good, it does look a little bit too much like the original. Nothing against the first design. It looks cool and modern. My new...... Listed under: [Sound – Audio Projects](#)
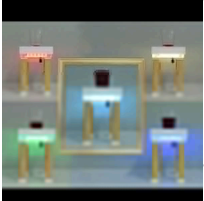
303. [For Newbies at Arduino Programming: Telling the Direction of Fire in 3 Seconds WITH PIXEL LIGHTS!](#) During my high-school sophomore year, the 3rd floor of our house lighted on fire due to a short circuit. Fortunately, my family was away on vacation for Christmas. But if we were home, wouldn't it be crucial to tell the direction of fire quickly so...... Listed under: [Arduino Programmer Projects](#)

304. [The Chug-O-Meter](#) Isn't it nice when you can hit two birds with one stone? That's exactly what we've done as we approach both Arduino Day and Saint Patrick's Day with our version of the Chug-O-Meter! We absolutely loved what the circuit.io team did with their Chug Meter...... Listed under: [Metering – Instrument Projects](#)

305. [Voice Controlled Smart Key Holder](#) Are you the kind of person who's not good with managing keys and always have to try each key for every other lock? Well don't worry, just grab a little bit of motivation and your maker tools to innovate your very own voice controlled smart...... Listed under: [Sound – Audio Project Ideas](#)

306. [Smart Coffee Table](#) We are in the joy of making a project that has been in our mind for a long time and sharing with you. Smart Coffee Table. Because this table is really smart. It illuminates your environment according to the weight of your drink. https://youtu.be/VUw4Wb8COo8 Step...... Listed under: [Home Automation Projects](#)
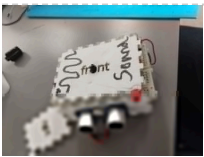
307. [Oceania Midi Controller (for Make Noise 0-Coast and Other Synths)](#) In the past few years, a number of synthesizer manufacturers have been releasing "desktop semi-modular" instruments. They generally take the same form factor as the Eurorack modular synthesizer format and most are probably intended as a gateway drug into the world of modular. (As addictions...... Listed under: [Sound – Audio Project Ideas](#)

308. [IoT Based Fingerprint Attendance System Using Evive (Arduino Based Embedded Platform)](#) Now, you can easily track attendance and clock working hours with the help of this easy and fun to make DIY fingerprint scanner! We'll be using ThingSpeak to store and retrieve the data. All you require is a cardboard piece, some colored paper, a fingerprint...... Listed under: [Memory – Storage Projects](#)

309. [Temperature and Servos](#) Two other tutorials I have written step you through the basics (Arduino 101) and how to create a really basic data logger (Arduino Datalogger - simple). This tutorial will step through how to attach servo motors, and use temperature sensor to move it! The premise...... Listed under: [Temperature Measurement Project Ideas](#)

310. [Ultrasonic Theremin (Teach Sound)](#) https://youtu.be/i9N0bSRXOZ8 The Ultrasonic Theremin is an Arduino project that uses a cheap theremin to teach sound waves. By changing the distance of my hand to the device, I am changing the frequency of the sound waves. Also, moving a potentiometer changes the amplitude of the...... Listed under: [Sound – Audio Project Ideas](#)

311. [Ultrasonics Based Positioning System](#) All the versions of ultrasonic radars I have found for arduino devices (Arduino - Radar/Ultrasonic Detector, Arduino Ultrasonic Radar Project) are very nice radars but all of them are "blind". I mean, the radar detects something but what is it detecting? So I propose myself to...... Listed under: [GPS Based Project Ideas](#)
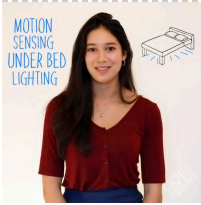
312. [Robotic Rat](#) Hello! My name is David, I am a 14-year-old boy living in Spain and this is my first Instructable. I have been building robots and fixing old computers for some time now and my robotics teacher told me that it was good time to start...... Listed under: [Robotics](#)

313. [Simple Garage Door Hack](#) After being accidentally locked out of my house on more than one occasion, I decided that there had to be better way to entering my home that did not involve breaking and entering (and without hiding a key outside somewhere). On taking a look at...... Listed under: [Security – Safety Project Ideas](#)

314. [Motion Sensing Under Bed Lighting](#) Ever tried to get out of bed quietly at night only to trip over something and wake up the whole house? Motion sensing night lights installed discreetly under your bed provide low-level light bright enough to guide you around those stray LEGO bricks but dim...... Listed under: [LED Projects](#)

315. [DIY Mini CNC Laser Engraver.](#) https://youtu.be/ZeAug4SNUSI This is an Instructables on how I Remixed my old CNC Laser engraver and made a Stable version of an Arduino based Laser CNC engraver and thin paper cutter using old DVD drives and using 250mW laser. Old Version of My CNC :https://www.instructables.com/id/Mini-CNC-Laser-Wood-Engraver-and-Paper-Cutter/ Old...... Listed under: [CNC Machines Projects](#)
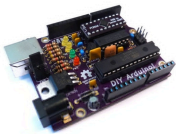
316. [How to Make a Picoballoon](#) https://youtu.be/KjPzfzLEIuY What is a picoballoon and why would I want to build it?! I hear you ask. Let me explain. You all probably know what a HAB (High Altitude Balloon) is. It's a bunch of weird electronics stuff connected to a balloon. There are soooo many tutorials regarding...... Listed under: [Battery Projects](#)
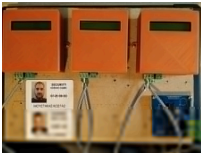
317. [The Ultimate Guide to Building a Quadcopter From Scratch](#) This project started all the way back when I was in 6th grade and completely new to electronics, when I thought to myself, "Hey, let's build a drone....it shouldn't be that hard......right?" Yea, guess what, it's hard. Almost 4 years later, this project is coming...... Listed under: [Drone](#)

318. [Ikea Kids Kitchen Lights Mod](#) For my daughters second birthday, we decided to get her a kitchen set. But I really wanted to make what we got her special and after being inspired by what some awesome makers had done with the Ikea Duktig Kitchen, we decided to get one...... Listed under: [LED Projects](#)

319. [DIY Arduino-Compatible Clone](#) The Arduino is the ultimate tool in the Maker's arsenal. You should be able to build your own! In the early days of the project, circa 2005, the design was all through-hole parts and communication was via a RS232 serial cable. The files are still available, so you can...... Listed under: [Interfacing(USB – RS232 – I2c -ISP) Project Ideas](#)

320. [Security Check RFID System Based on Arduino and RS485 Data Bus](#) In this DIY guide I will show you how to make your own security check system based on Arduino! You can use this system in areas with security guards (e.g. warehouses, malls, open areas). Every guard will have a personal RFID card with a unique...... Listed under: [Security – Safety Project Ideas](#)

321. [YouTube Subscriber Counter Bubble Machine](#) https://youtu.be/qsFZ6o-1S0E The idea was born after being selected to expose at Maker Faire Lille, a giant event around Science, inventions and the Do-It-Yourself mindset. I wanted to build something that makes visitors want to subscribe to my YouTube channel YouLab.I quickly though about a real...... Listed under: [Motor Projects](#)

322. [Interactive Dandelion](#) https://youtu.be/BhkrtQ5O1Rk This project shows how to make an interactive picture of a dandelion. It starts as a yellow flower with LED's for petals then changes into a white dandelion clock, which can be blown on to make the seeds disperse. It is based on a...... Listed under: [Sensor – Transducer – Detector Project Ideas](#)

323. [Advantech Builds Gaming SBC powered by AMD's Ryzen V1000](#) Advantech announced a new gaming and lottery board, the DPX-E265. The gaming board is based on AMD's Ryzen V1000, which features a 4x DP++ ports, 2x SATA, plus M.2, PCIe x16, and PCIe x4 expansion. Prior to the DPX E265, in February of this year...... Listed under: [Sound – Audio Project Ideas](#)

324. [Arduino TFT Interfacing Basics](#) TFT touchscreens are the amazing graphical interface which can be used with microcontrollers such as Atmel, PIC, STM, as it has a wide color range, and good graphical ability and a good mapping of pixels. Today, we are going to Interface 2.4 inch TFT LCD...... Listed under: [LCD Projects](#)

325. [ABUSED HARD DRIVE BECOMES POV CLOCK](#) We all know that there's not much to do with an old hard drive. Once you render the platters unreadable and perhaps harvest those powerful magnets, there's not much left of interest. Unless, of course, you turn the whole thing into a persistence-of-vision clock. At least...... Listed under: [Clock – Timer Project Ideas](#)

326. [DIY Arduino Mini Laser Engraver](#) Hello Guys Whatsup, In this instructable, I am making an Awesome mini laser engraver from old DVD writers. It's an amazing machine. You can use this laser engraver machine to make any kind of design, logo, art on the surface like WOOD, MDF, PLYWOOD, VNYL...... Listed under: [LED Projects](#)

327. [Persistence of Vision (PoV) Display Using Arduino](#) Time for a fun-filled, easy-peasy Japan-easy to make a project! Today, we're going to show you how to make an LED POV Display. POV, an acronym for the persistence of vision, is a kind of optical illusion in which a visual image seems to persist...... Listed under: [LED Projects](#)

328. [Arduino Based Wireless (RF) Weather Station Network](#) In this DIY guide I will show you how to make your own wireless weather station! My communication protocol will allow you to have up to 10 sensor stations in your wireless network, but you can change and extend it up to 254 stations! The...... Listed under: [Wireless Projects](#)

329. [Game of Thrones Light Up Map](#) Spoiler! Winter is definitely coming. But make this cool Game of Thrones light up map for a Spring project. The map lights up with a flame effect revealing the sigil of the remaining house in power. What do I know, make it with the sigil...... Listed under: [Game – Entertainment Project Ideas](#)

stored in...... Listed under: [Security – Safety Projects](#)

331. [UCL-Embedded – Arduino Door Lock](#) This project was created by Daniel Månsson [], Flemming Andersen [flem781a] and Mikkel Pavia [mikk24b9] as an exam project at the school University College Lillebælt. As a part of one of our electives, during second semester, in automation engineering, we were tasked with creating an...... Listed under: [Security – Safety Project Ideas](#)

332. [Retro Speech Synthesis. Part : 12 IoT, Home Automation](#) https://youtu.be/MwtR3u_uS0M This article is the 12th in a series on home automation Instructables documenting how to create and integrate an IoT Retro Speech Synthesis Device into an existing home automation system including all the necessary software functionality to enable the successful deployment within a domestic environment. Picture...... Listed under: [Home Automation Project Ideas](#)
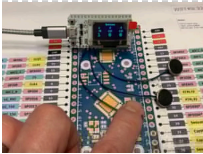
333. [Desktop Gigapixel Microscope](#) https://youtu.be/mKXoA6zDu98 In optical microscopes, there is a fundamental trade-off between field-of-view and resolution: the finer the detail, the smaller the region imaged by the microscope. One way to overcome this limitation is to translate the sample and acquire images over a larger field-of-view. The basic...... Listed under: [Video – Camera – Imaging Projects](#)

334. [Rory the Robot Plant](#) Rory is a funny looking robot in the form of a plant, interact with some inputs by sensors, play music and detect any human movements around, in addition, to snap photos when you order it too. It's also caring about a small plant inside the...... Listed under: [Robotics – Automation Project Ideas](#)

335. [Extremely Sensitive Cheap Homemade Seismometer](#) Step 1: Demonstration of Sensitivity https://youtu.be/HwmOgygAbvw On the video you can see the manufacturing process and the sensitivity of shocks Step 2: Components Otherwise, the seismometer itself consists of two parts, a mechanical tremor detector, and an electronic part that turns these tremors into electrical...... Listed under: [Home Automation Project Ideas](#)

336. [ESP32 Capacitive Touch Input Using "Metallic Hole Plugs" for Buttons](#) https://youtu.be/qQG8SdMgj8I As I was finalizing design decisions for an upcoming ESP32 WiFi Kit 32 based project requiring three button input, one noticeable problem was that the WiFi Kit 32 does not possess a single mechanical pushbutton, yet alone three mechanical buttons, for input. However, the...... Listed under: [Wifi - WLan Projects](#)

337. [Electronic Magic 8 Ball and Eyeball](#) https://youtu.be/e5p-RsFV5iA https://youtu.be/S2ajD3oJD34 https://youtu.be/uaUTn9RBmPg I wanted to create a digital version of the Magic 8 Ball... The body of this is 3D printed and the display has been changed from an polyhedron in blue dye to a small OLED controlled by a random number generator programmed...... Listed under: [Battery Projects](#)
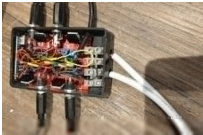
338. [Play Songs(MP3) With Arduino Using PWM on Speaker or Flyback Transformer](#) This is my first instructable, I hope you will Like It!! Basically, In this Project I have used the Serial Communication between my Arduino and my Laptop, to transmit music data from my laptop to the Arduino. And using the Arduino TIMERS to play the...... Listed under: [Sound – Audio Project Ideas](#)

339. [ESP32 NTP Temperature Probe Cooking Thermometer With Steinhart-Hart Correction and Temperature Alarm.](#) https://youtu.be/72ekCautaIQ Still on the journey to complete an "upcoming project", "ESP32 NTP Temperature Probe Cooking Thermometer With Steinhart-Hart Correction and Temperature Alarm" is an Instructable showing how I add an NTP temperature probe, piezo buzzer and software to my capacitive touch Instructable "ESP32 Capacitive Touch...... Listed under: [Temperature Measurement Project Ideas](#)

340. [Stroboscopic Fountain](#) For our SIDE project, a year long project that we do for Ms. Berbawy's Principles of Engineering class, we decided to make a stroboscopic fountain. The stroboscopic effect, pioneered by Harold Edgerton, makes objects appear as though they are moving in slow motion. How does...... Listed under: [LED Projects](#)

341. [Arduino Powered, Sensor Controlled Fading LED Light Strips](#) https://youtu.be/mzeA3yxu_lg https://youtu.be/jH2gEoB5x1w I recently had my kitchen updated and knew that lighting would 'lift' the look of the cupboards. I went for 'True Handless' so I have a gap under the work surface, as well as a kickboard, under cupboard and on the top of...... Listed under: [Sensor – Transducer – Detector Project Ideas](#)

342. [Arduino Bluetooth Camera](#) Today you can hardly surprise anyone with a mobile phone with a camera, wireless gadgets and other technical advances. Thanks to the Arduino platform, millions of people have discovered the wonderful world of electronics and programming. 100,500 instructions were written on how to exchange data...... Listed under: [Bluetooth Projects](#)

343. [Self Irrigating Planter (with Moisture Sensor)](#) The problem we picked was - Growing plants in limited space by amateurs. Many people would like to grow plants (basic vegetables, herbs for the kitchen, etc) but do not have enough space in their house to do so. They also may not have the...... Listed under: [Sensor – Transducer – Detector Project Ideas](#)

344. [Arduino Controlled Robotic Arm W/ 6 Degrees of Freedom](#) I am a member of a robotics group and each year our group participates in an annual Mini-Maker Faire. Beginning in 2014, I decided to build a new project for each year's event. At the time, I had about a month before the event to put something together...... Listed under: [Robotics – Automation Project Ideas](#)
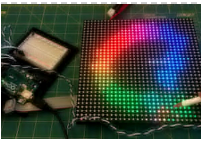
345. [Simple Arduino RGB LED Cube (3x3x3)](#) https://youtu.be/raGzxHcS7NA I´ve been looking into LED Cubes and noticed that most of them were either to complicated or to expensive. After looking at a lot of different cubes, I finally decided that my LED Cube should be: easy and simple to buildaffordablevery stylish and extravagant...... Listed under: [LED Projects](#)

347. **Doggo Walking Light** Walking a dog in the dark comes with the safety risk of motorists who don't see you walking, we've had a few close shaves with drivers turning quickly into or backing out of driveways or when crossing road intersections. So why not illuminate your favorite...... Listed under: [LED Projects](#)

348. **Using a LED Matrix As a Scanner** https://youtu.be/9F9EUaXhj5M Ordinary digital cameras work by using a large array of light sensors to capture light as it is reflected from an object. In this experiment, I wanted to see whether I could build a backwards camera: instead of having an array of light sensors,...... Listed under: [LED Projects](#)
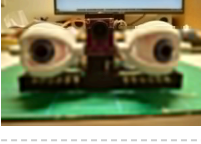
349. **Turn a Commodore 64 Into an IOS Bluetooth Keyboard** This instructable describes how to turn a Commodore 64 computer into a bluetooth keyboard. It involves programming a micro controller with the Arduino IDE and constructing a circuit board. Supplies you'll need (some are optional): Commodore 64 with keyboard (remove mother board, it is not...... Listed under: [Bluetooth Projects](#)

350. **Model Railway Layout With Automated Passing Siding (V2.0)** This project is an update of one of the previous model railroad automation projects, The Model Railway Layout with Automated Siding. This version adds the feature of coupling and decoupling of the locomotive with the rolling stock. The operation of the railway layout is as follows:...... Listed under: [Motor Projects](#)
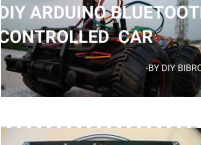
351. **Vacuum Fluorescent Display Watch** That whole project started a while back with an hackaday article from 2014 in which [Johngineer] build the 'ChronodeVFD', a wristwatch made from an old soviet vacuum fluorescent display. It kind of triggered the 'shut up and take my money' reflex in me, but as it wasn't...... Listed under: [LCD Projects](#)
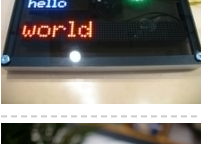
352. **Motion Follow Animatronics Eyes** https://youtu.be/Ep9fWQiFmoM This Arduino project uses an Optical Flow Sensor (ADNS3080) to capture movement. Then translate the data to move servo's making it look as eyes are following moving object. This is not an easy build. It requires 3d printing, soldering, some general technical understanding and...... Listed under: [LED Projects](#)

353. **CNC Arduino Plant Growing Machine** https://youtu.be/Sidcq555B-8 I designed a CNC Arduino Plant Watering machine for my local high school science and engineering fair. I ended up getting second place in the maths and engineering category, won $200 from the Missouri Society of Engineers, and was invited to compete in an...... Listed under: [CNC Machines Project Ideas](#)
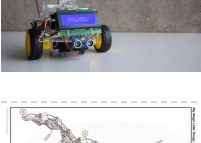
354. **DIY ARDUINO BLUETOOTH CONTROLLED CAR** 🙂 Hello, Guys! In this instructable tutorial, I'm going to make an Arduino nano based smartphone (Bluetooth) controlled car. All we know that Arduino is an excellent prototyping platform, principally because it uses a friendly programming language and there are a lot of extra incredible components...... Listed under: [Bluetooth Projects](#)
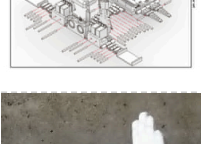
355. **Mirolo Networked LED Matrix Display for Digital Signage** Digital signage can be useful at events to inform visitors about upcoming panels, changes in the schedule or dynamically provide information. Using LED Matrix displays for that makes the messages readable even from far away and is an eye catching feature. Features include: 2 Lines...... Listed under: [Arduino Battery Project Ideas](#)
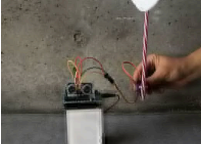
356. **Wipy: the Overly Motivated Whiteboard Cleaner** https://youtu.be/_uObXbdwi4w Introduction Did you ever get tired of cleaning the whiteboard? Have you ever wondered how much your life would improve if a robot could do this for you? You now have the chance to make this a reality with Wipy: the overly motivated whiteboard...... Listed under: [Robotics – Automation Project Ideas](#)
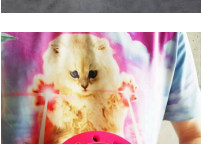
357. **BotTender** https://youtu.be/p6wJBZe1YVg BotTender, a bartender assistant that pours the perfect shot! BotTender is an autonomous robot that is designed with the aim of automatising bars. It is placed on top of the bar and detects the shot glasses in front of it. Once the glasses are...... Listed under: [Battery Projects](#)

358. **Magic Feeler** https://youtu.be/_lEu2h-2iWs The project conducted as part of the Computational Design and Digital Fabrication seminar in the ITECH masters program. A Project by: ShuChuan Yao, Jeongwoo Jang, Zijie Tan Arduino Uno Servo Motors x4 fishing wires pins (cotton buds stem, thread rod, toothpick) Gyro Sensor 9V...... Listed under: [Battery Projects](#)

359. **Slapstick** https://youtu.be/g1-p7gsNzpk The project conducted as part of the Computational Design and Digital Fabrication seminar in the ITECH masters program. https://icd.uni-stuttgart.de The Idea Exam period is coming. And you already feel sleepless and hopeless. You want to study, but you've lost your motivation. And it's crucial that...... Listed under: [Sensor – Transducer – Detector Project Ideas](#)
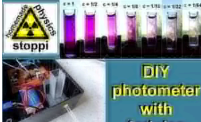
360. **The Moral Compass** The project conducted as part of the Computational Design and Digital Fabrication seminar in the ITECH masters program and was brought to you by Vanessa Costalonga, James Hayward and Christo van der Hoven. Have you ever doubted the choices that you make? Have you ever...... Listed under: [Motor Projects](#)

361. **Pc-Privacy – Arduino Automated Privacy for Your Computer** If you live with other people or have your own office you might be familiar with the problem of people randomly appearing in your room while you are working on confidential data or just have some weird stuff open on the 2nd Screen from hours...... Listed under: [Security – Safety Project Ideas](#)

363. **DIY LED-photometer With Arduino for Physics or Chemistry Lessons** Liquids or other objects appear colored because they reflect or transmit certain colors and in turn swallow (absorb) others. With a so-called photometer, those colors (wavelengths) can be determined, which are absorbed by liquids. The basic principle is simple: with a LED of a certain color…… Listed under: LED Projects

364. **Arcade Button MIDI Keyboard** This is a version 2.0 of one of my first forays into Arduino and DIY MIDI programming. I've developed my skills in prototyping and design so I thought it would be a good demonstration of process and progression. With a more informed design process I…… Listed under: Development Board – Kits Projects
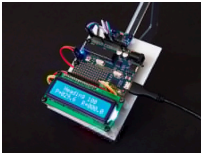
365. **Tilt Compensated Compass** https://youtu.be/PY_17f5RByI This instructable explains how to make a tilt compensated compass using an Arduino UNO R3, an LCD display, and an IvenSense MPU-9250 multi-chip-module that contains an MPU-6050 accelerometer / gyro and an AK8963 magnetometer within the same package. The LCD simultaneously displays the Heading,…… Listed under: LCD Projects

366. **Automatic Gate Slider Under $100** Over the summer, my dad motivated me to look into buying a gate automation system and setting it up. So I started my research and looked into package solutions on AliExpress and local vendors. The local vendors were offering complete solutions including installation for >…… Listed under: Home Automation Projects

367. **Animated Word Clock** Build your own Word Clock with an animated display. This is a simple project uses an Arduino Nano, Color LEDs and includes a stylish 3D Printed Case. The Word Clock has three animated patterns- Matrix style - Typewriter Style - Rainbow Color The three buttons…… Listed under: Clock – Timer Projects

368. **Temperature Controlled Vaccine & Insulin Cooler** Keeping cool saves lives In the developing world, vaccines are the front line of defense against dangerous illnesses such as Ebola, Influenza, Cholera, Tuberculosis and Dengue to name a few. Transporting vaccines and other life-saving materials such as insulin and blood require careful temperature control……. Listed under: Temperature Measurement Project Ideas

369. **New Wireless IOT Sensor Layer for Home Environmental Monitoring System** This Instructable describes a lower-cost, battery-powered wireless IOT sensor layer for my earlier Instructable: LoRa IOT Home Environmental Monitoring System. If you haven't already viewed this earlier Instructable, I recommend reading the introduction for an overview of the capabilities of the system which are now extended…… Listed under: Wireless Projects
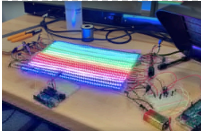
370. **EqualAir: Wearable NeoPixel Display Triggered by Air Pollution Sensor** https://youtu.be/WUYE5HS9Gtc The aim of the project is to make a wearable t-shirt that displays an evocative graphic when air pollution is above a set threshold. The graphic is inspired by the classic game "brick breakers", in that the car is like a paddle which spits…… Listed under: Sensor – Transducer – Detector Projects

371. **DIY RGB-LED Glow Poi With Remote Control** Introduction Hello Everyone!This is my first guide and (hopefully) the first one in a series of guides on my quest to create an open-source RGB-LED visual poi. To keep it simple first, this is going to result in a simple led-poi featuring remote control via…… Listed under: LED Projects

372. **Arduino-controlled DIY Coffee Roaster** In this Instructable we will have a look at modifying a hot-air popcorn machine to turn it into a fully automatic and temperature-controlled home coffee roaster. Roasting coffee at home is surprisingly simple, and even something as basic as a frying pan can do the…… Listed under: Other Projects

373. **Super Stylish Automatic Cat Feeder** https://youtu.be/uVHh2rHcWi4 Jojo is a super handsome cat.I love him in every aspect, except he keeps waking me up everyday 4am in the morning for his food, so it's time to get an automatic cat feeder to save my sleep. However, he is so handsome that…… Listed under: Motor Projects

374. **Raft Bird Repeller** In this project I will show you how to build a solar-powered Raft Bird Repeller that will get rid of those pesky birds that poop on your raft. Step 1: Intro https://youtu.be/Z9JdDufT_Ss If you have ever been on a raft, you know just how relaxing…… Listed under: Solar energy projects

375. **Project Small Car** This car was made as a creative activity for students from Erazmus project. The Small Car celebrated big succes. So I've decided to share this small, unassuming and yet very educative project with community. It's ideal to entertain students, for instance during public open day…… Listed under: Car Projects

376. **Arduino Water Cycle Diorama** https://youtu.be/JqdOQ7wjEsQ We'll be making a diorama presenting the water cycle, using Arduino and some motors to add movement and lighting. It has a school feel - because it is actually a school project! The presentation scenario is this: The sun rises in the morning [One…… Listed under: Other Projects

377. **Rug With Sensors/ RF Communication With Arduino Micro** I recently finished the installation Equally diverse, which is made of a series of lamps that react to the sensors placed in a rug underneath the lamps.Here is how I made the rug with pressure sensors.I hope you will find it useful. 🙂 Step 1:…… Listed under: Sensor – Transducer – Detector Projects

378. **Home Presence Simulator and Security Control Device** This project allow us to simulate presence and to detect movements in our home. We can configure a network of devices installed in differents rooms of our home all of them controlled by a main device. This project combines these features on a single device (PICTURE 1)…… Listed under: Security – Safety Projects

379. [Old Man and the Arduino GPS](#) So this Lazy Old Geek (L.O.G.) hasn't been able to do an Instructable for a few years. At 70 years old, the brain doesn't work as well as it used to and it's hard to focus on big projects let alone try to write about…… Listed under: [GPS Based Projects](#)

380. [Tim's Cybot Arduino NANO Remote Control](#) This project is to create an Infrared Remote Control to control the Original Cybot received with the magazine Ultimate Real Robots, started back in 2001. Reason for making the remote:(a little history) Before the issue of the parts for the IR handset, Cybot was put…… Listed under: [Other Projects](#)

381. [Condensation Risk Evaluator](#) Hi everyone, I work as a builder even though I've been always really interested in new technologies. I've learned a little about 3d printing, Arduino and electronic issues reading a lot. I visit this web regularly so I would like to make my little contribution……. Listed under: [Other Projects](#)

382. [Adaptable Sun Visor Cap](#) The project conducted as part of the Computational Design and Digital Fabrication seminar in the ITECH masters program. The sun blinds you and you have no hand free? No problem anymore… Here you can find all the important information to build your own adaptable sun visor cap……. Listed under: [Other Projects](#)

383. [A Complete Beginner's Guide to SMD Soldering](#) https://youtu.be/tERQQ0S8aJI Alright so soldering is pretty straightforward for through-hole components, but then there are times when you need to go tiny *insert ant-man reference here*, and the skills you learnt for TH soldering just dont apply anymore.Welcome to the world of Surface Mount Device (SMD)…… Listed under: [Other Projects](#)

384. [PKE Meter Geiger Counter](#) https://youtu.be/VS8lQ5SYb7U I have been wanting to build a Geiger counter for a long time to complement my Peltier Cooled Cloud Chamber. There is (hopefully) not really much useful purpose in owning a Geiger counter but I just love the old Russian tubes and thought it would…… Listed under: [Other Projects](#)
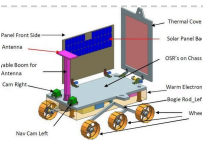
385. [Tabletop Pinball Machine Using Evive- Arduino Based Embedded Plaform](#) Another weekend, another exciting game! And this time, it's none other than everybody's favorite arcade game - Pinball! This project will show you how to make your very own Pinball machine easily at home. All you'd need are components from the evive Starter Kit, some…… Listed under: [Game – Entertainment Projects](#)

386. [Body-ultrasound Sonography With Arduino](#) My hobby and passion is to realize physics projects. One of my last work is about ultrasonic sonography. As always I tried to make it as simple as possible with parts you can get on ebay or aliexpress. So let's take a look how far…… Listed under: [Sound – Audio Projects](#)

387. [The "Flute" of Imitation](#) https://youtu.be/Cy4meKH5UAY https://youtu.be/Xb691A9sYRc As one of the top ten common instruments played worldwide, the amount of beginners studying the flute comes in quite a quantity. While The "Flute" of Imitation does not train one's breath control, the "instrument" concentrates on the fundamental fingerings, crucial to familiarize…… Listed under: [Other Projects](#)

388. [IOT Lunar Rover Raspberrypi+Arduino](#) https://youtu.be/mcdEGQTxE88 This project is inspired by the Indian moon mission Chandryaan-2 Which will take place in September 2019.This is a special mission because they are going to land on the spot where no one has every landed before.So to show my support i decided to…… Listed under: [Solar energy project Ideas](#)

389. [IoT Mouse-Friendly Live Trap](#) https://youtu.be/LA21193Wel4 This is a trap to capture the mice without hurting them, so you can release them outside. If the proximity sensor detects the mouse, the Servo motor will close the door. You will receive an instant message and/or an Email, to inform you that…… Listed under: [Sensor – Transducer – Detector Project Ideas](#)
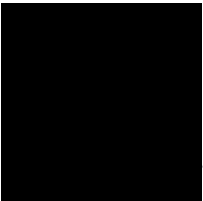
390. [HAVE FUN WITH BICOLOR MATRIX 32×32](#) Today I will share following topics base on a bicolor matrix led 32x32: D.I.Y a bicolor led matrix 32x32.How to control led board above with NodeMCU ESP8266 via B.A.M method.Introduce and share my code for some cool real time clock projects with this bicolor led…… Listed under: [Other Projects](#)

391. [Making Your First Printed Circuit Board – Getting Started With PCBWAY [PART 1]](#) If you are into electronics, PCBs (Printed Circuit Board) are some of the most common things you will see. These boards make our lives easier by eliminating all those connecting wires and breadboards. If properly designed, it will reduce the size of your device and…… Listed under: [Electronics News Updates](#), [Medical – Health based Project Ideas](#)
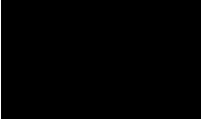
392. [CloudyData – ESP8266 to Google Sheets Made Simple](#) I've been looking for cloud data storing for a long time during last years: it is interesting to monitor data from any kind of sensor, but it is more interesting if these data are available everywhere without any storage difficulty such as using SD cards…… Listed under: [Other Projects](#)

393. [Weather-station With Arduino, BME280 & Display for Seeing the Trend Within the Last 1-2 Days](#) Here on instructables weather stations have already been introduced. They show the current air pressure, temperature and humidity. What they lacked so far was a presentation of the course within the last 1-2 days. This process would have the advantage that you can not only…… Listed under: [Other Project Ideas](#)
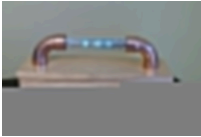
395. **Totally Lit – Programmable RGB LED Acrylic Sign** https://youtu.be/AcvpgUQGPn4 Been playing around with the laser cutter/engraver, and really fell in love with engraving in to clear acrylic and shining a light source from the edge. The thickness of the acrylic being used is a .25" sheet, which cuts really cleanly by the laser…… Listed under: LED Projects

396. **Portable Luxmeter** This project is about making portable luxmeter. It can be used in schools, where children can measure different kinds of light sources.Functions: 1. measure intensity of light in lux. 2. calculate solar irradiation from lux to watts/m2 (factor 112) 3. charging battery using USB port…… Listed under: Battery Projects
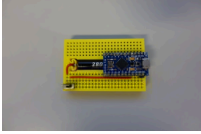
397. **DIY Arduino Starter Kit Shield** In this guide I will show you how to make your own Arduino learning shield. This learning shield can be useful at schools, universities and to everyone that want to start dealing with the Arduino. With this shield you will learn how to read the…… Listed under: Other Projects

398. **Dev Board Breadboard** This Instructables show how to create a tailor-made breadboard for dev board. Step 1: Current Breadboard Breadboard (solderless breadboards) is a very import component for prototyping of electronics. It can help you test the circuit before soldering it. Since the connection not require soldering, after…… Listed under: Other Projects

399. **Portable Arduino Bot** Over the years, I have built many robotic projects and most of it run by an Arduino so let me explain a little bit about this amazing technology. Arduino is a microcontroller board, has up to 14 digital input/output pins (of which 6 can be…… Listed under: Robotics – Automation Projects

400. **The E.M.F.Meter** Hello, fellow Makers! In this instructable, I will be discussing my newest and most versatile tool for edcuation: the E.M.F. Meter. This instructable will be covering a lot of steps involving Arduino and Raspberry Pi software. Although resources will be provided, please make sure you…… Listed under: Metering – Instrument Projects

401. **Cyclone(Arduino LED Game)** In this tutorial, I will teach you how to create an LED game with very little code or experience! I had this idea for a while and finally got around to creating it. It's a fun game that reminds us all of the arcade games……. Listed under: Game – Entertainment Projects

402. **DIY Smart Dustbin With Arduino** Here we will make a Smart Dustbin by using arduino and ultrasonic sensor.I hope you guys enjoy learning this project. Supplies: Arduino UnoUltrasonic SensorServo MotorDustbin Step 1: Preparing the Opening Take a plastic sheet and cut fraw a circle with the help of dustbin and…… Listed under: Home Automation Projects

403. **DIY Givi V56 Motorcycle Topbox Light Kit With Integrated Signals** https://youtu.be/xtSzXwfG3HA As a motorcycle rider, I'm all too familiar with being treated like I'm invisible on the road. One thing I always add to my bikes is a top box which usually has an integrated light. I recently upgraded to a new bike and bought…… Listed under: Wireless Projects
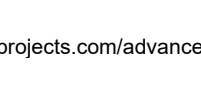
404. **Color Instrument** This a simple Arduino/3D printing project about colors and sounds. I made this device or as I call it 'color instrument' for activity for kids. It's fun and it's a good conversation starter about physics of colors and sound. The most interesting fact about colors,…… Listed under: Other Projects

405. **Air Quality Sensor: Concept to Production** This is the full documentation of the Autodesk University Air Quality Sensor project. Attendees at several events have participated in assembling their own air quality sensor over the past several months. The Concept to Production page will give you more information on how you can use Fusion…… Listed under: Sensor – Transducer – Detector Projects

406. **TTGO T-Watch** https://youtu.be/gSs7gNcs25Q This instructables show how to start playing with TTGO T-Watch. Step 1: What Is TTGO T-Watch? TTGO T-Watch is watch shape ESP32 based development kit. 16 MB flash and 8 MB PSRAM both are top specification. It also built-in a 240x240 IPS LCD, touch…… Listed under: Clock – Timer Projects

407. **FM Radio** https://youtu.be/oNqWfiP2yg0 Recently, I came across RDA5807 module which is an FM Radio Tuner in a very tiny package. It is very cheap and uses I2C protocol for communication which means that only two wires will be required to talk to the IC. Less wiring! My mom used…… Listed under: Radio Projects

408. **Cowboy Toy – Arduino Laser Target** In the lesson I will show you how I made a toy on arduino that will suit beginners. If you start working with sensors, then this toy will suit you as a homemade product. Step 1: Watch the Video https://youtu.be/WQGvIEtyMRw Step 2: Material: - plywood…… Listed under: Other Projects
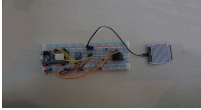
409. **Bicycle Speedometer Display** What Is It? As the name suggests, in this project you will learn how to create a display for your bike that consists of both a speedometer and an odometer. Indicating real time speed and distance travelled. The total cost of this project comes to around 15 USD (not including the…… Listed under: LCD Projects

410. **Escape Room Decoder Box** Escape Rooms are awesomely fun activities which are highly engaging and great for teamwork. Have you ever thought about

411. [Weather Based Music Generator (ESP8266 Based Midi Generator)](#) Hi, today I'll explain how to make your own little Weather based Music generator. It's based on an ESP8266, which is kind of like an Arduino, and it responds to temperature, rain and light intensity. Don't expect it to make entire songs or chord progressions....... Listed under: [Sound – Audio Projects](#)

412. [MAX7219 LED Dot Matrix Assembly and Testing](#) https://youtu.be/DLC6FyxNayo A Dot-Matrix Display is a display device which contains light emitting diodes aligned in the form of matrix.This Dot matrix displays are used in applications where Symbol, Graphic, Characters, Alphabets, Numerals are need to be displayed together in static as well as Scrolling motion.Dot Matrix Display...... Listed under: [LED Projects](#)
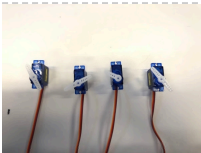
413. [Popsicle Stick Robotic Arm](#) https://youtu.be/bP358pV-vVY Here's how to build a simple robotic arm with a gripper using popsicle sticks, an Arduino, and a few servos. Supplies: Feel free to use similar materials or whatever you already have. (e.g. cardboard instead of popsicle sticks) Materials: 14 Popsicle Sticks 4 Micro...... Listed under: [Robotics – Automation Projects](#)
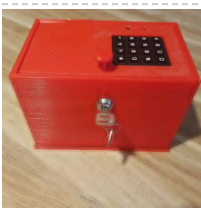
414. [B-Safe, the Portable Safe](#) https://youtu.be/7b1sMp4J7ck The problem Imagine this: You wake up one morning and the weather is real good. You want to go to the beach.Because you don't live too close to the beach, you take your car. To pay for the parkingat the beach, you use your...... Listed under: [Security – Safety Projects](#)

415. [Arduino MIDI Chiptune Synthesizer](#) Relive the fun of early computer game music with an authentic 8-bit chiptune synthesizer, which you can control over MIDI from the comfort of any modern DAW software. This simple circuit uses an Arduino to drive an AY-3-8910 programmable sound generator chip (or one of its many...... Listed under: [Interfacing(USB – RS232 – I2c -ISP) Projects](#)

416. [WIFI JOYSTICK](#) Today I will share how to make a WIFI JOYSTICK from an ESP8266 and 4 ways industrial joystick. It can be integrated into the factory's automation system or be used for smart home control. The mentioned control systems are PLCs and the specific case that...... Listed under: [Wifi - WLan Projects](#)

417. [Save Water & Money With the Shower Water Monitor](#) Which uses more water - a bath or a shower? I was recently thinking about this question, and I realized that I don't actually know how much water is used when I shower. I know when I'm in the shower sometimes my mind wanders, thinking...... Listed under: [Other Projects](#)

418. [Arduino Magnetometer](#) What are we building? Humans can't detect magnetic fields, but we use devices that rely on magnets all the time. Motors, compasses, rotation sensors, and wind turbines, for example, all require magnets for operation. This tutorial describes how to build an Arduino based magnetometer that...... Listed under: [Other Projects](#)

419. [Arduino Watch Core](#) https://youtu.be/lFRq-LM5flQ This instructables show how to use a square color display and Arduino dev board build a watch core. This will cover the topics of dev board selection, display selection, extra modules selection, UI design, performance tuning and power saving. Note: I have prototyped some...... Listed under: [Clock – Timer Projects](#)

420. [RS485 – ARDUINO AND INDUSTRIAL DISTANCE SENSOR](#) I have in my hand a distance laser sensor with high precision and speed. It is used in industrial environments for object positioning or detection applications. According to technical documents, I found it can communicate with other devices via RS485. I spent the weekend to...... Listed under: [Sensor – Transducer – Detector Projects](#)

421. [Flip-It! – the World's Dumbest Game?](#) https://youtu.be/1QCvlQLj2JA Origins: This is a game I developed over a couple of years 2018-2019 It was originally called "Stupid Flip" and came out of my interest in creating simple and fun interactive games that could also be used for teaching coding. This is about the...... Listed under: [Game – Entertainment Projects](#)

422. [Alaska Datalogger](#) Alaska is on the edge of advancing climate change. Its unique position of having a fairly untouched landscape populated with a variety of coal mine canaries enables a lot of research possibilities. Our friend Monty is an Archaeologist who helps with camps for kids in...... Listed under: [Arduino Programmer Projects](#)

423. [Arduino Watch](#) This Instructables show how to make a Arduino Watch from Arduino Watch Core. Step 1: Preparation Arduino Dev Board This time I am using Sparkfun Pro Micro 3.3 V 8 MHz dev board. Watch Display This time I am using a ST7789 1.3" IPS LCD. Lipo...... Listed under: [Clock – Timer Projects](#)

424. [Motion Controlled Pong Video Game](#) i'm MrWaffelXD and today I want you to show how to make a motion controlled Pong game. In this guide you learn, how to programm your own Pong and how to make a distance-controller, which you can use by moving your hand. But first: What is...... Listed under: [Game – Entertainment Projects](#)
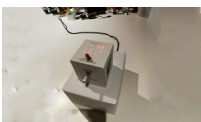
425. [E-dice – Arduino Die/dice 1 to 6 Dice + D4, D5, D8, D10, D12, D20, D24 and D30](#) https://youtu.be/B-dnzLoZDlw This is a simple arduino project to make a electronic die. It is possible to choose for 1 to 6 dice or 1 out of 8 special dice. Choice is made by simply turning a rotary encoder. These are the features: 1 die: showing...... Listed under: [Other Projects](#)
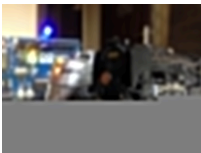
427. [Playing Chess Against Arduino](#) This project has been developed with the "Games" contest in my mind, I hope you'll like it and give your vote 🙂 The idea of this project is quite simple. I want to simulate as many board games as possible using a simple electronic assembly....... Listed under: [Game – Entertainment Projects](#)

428. [Toast Talker](#) https://youtu.be/9jhreDmp_GM This Instructable started as my great interest in the TV show Toast of London. The British Matt Berry comedy that can now be found on Netflix has some superb voice overs that I wanted to accommodate in my morning toaster routine. In a running joke, he...... Listed under: [Sound – Audio Project Ideas](#)

429. [DIY Low Cost Air Hockey Table](#) https://youtu.be/nLU8pFqxcTU A professional air hockey setup is usually available only in arcades due to the sophisticated systems that are required to operate it. Our goal was to build a DIY air hockey table, bringing this gaming experience at home. By using commonly available materials we...... Listed under: [Game – Entertainment Projects](#)

430. [The 'Do More' Timer, Inspired by Casey Neistat](#) https://youtu.be/anUKywfO_l8 Summer, the lovely season when things happen. But sometimes we tend to forget the time. So to remind us the time left , I designed this Casey Neistat's 'Do More' DIY arduino driven timer which can be programmed to display the time left from...... Listed under: [Clock – Timer Projects](#)

431. [Creating a Physical Game Controller](#) When the Nintendo Wii was launched players were encouraged, nay required, to leave the sofa and jump, dance, and jiggle in order to score points in their game of choice. While there is a steep learning curve in building for the Wii, it is easy...... Listed under: [Game – Entertainment Projects](#)

432. [3D Printed Arduino RC Airboat With Controller](#) This is a project that combines the knowledge of 3D printing and Arduino. It is a good beginners project for anyone interested in making their own RC boat or just interested in using 3D printing and Arduino for their own creations. Supplies: Look at step...... Listed under: [Other Projects](#)

433. [Magic Button 4k: the 20USD BMPCC4k Wireless Remote Control](#) https://youtu.be/_3tlmJh9MJA Many people have asked me to share some details about my wireless controller for the BMPCC4k. Most questions were about the bluetooth control, so I'll mention a few details about that. I am assuming you are familiar with the ESP32 Arduino environment. This version...... Listed under: [Wireless Projects](#)

434. [Smart Power Strip With Cayenne Cloud](#) https://youtu.be/uXSMAoU3B6Y This instructable shows how you can build your own easy or simple DIY Internet-connected Smart Power Strip to control Electrical Appliances from remotely.You can also automate the daily repetitive task with scheduling feature, so the appliance will automatically be turned on and off on...... Listed under: [Other Projects](#)

435. [SteamPunk Radio](#) This project is without doubt the most complex I have undertaken, with sixteen IV-11 VFD tubes, two Arduino Mega cards, ten LED Neon light circuits, a servo, an electromagnet, two MAX6921AWI IC Chips, five DC power supplies, a HV power supply, two DC Volt meters,...... Listed under: [Radio Projects](#)
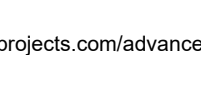
436. [FS-Touch Bed Levelling Tool](#) https://youtu.be/RZ0BV73TAOc Tired of trying to get the perfect levelled 3D printer bed? Frustrated with guessimating the proper resistance between nozzle and paper? Well, FS-Touch will help you measure this pinching force quantitatively and achieve quick and accurate bed levelling in no time. Features of this bed levelling(proper...... Listed under: [CNC Machines Projects](#)

437. [How to Setup Cheapduino Board (smallest Arduino)](#) When it comes to electronics projects, Arduino is definitely one of the most favorite choices of every enthusiast, and if you are Arduino fan like me, you too build all your projects on Arduino, so what if you have limited boards available to use? And...... Listed under: [Other Projects](#)

438. [[DEPRECATED] Arduino-Based Smart Glasses by a 13-year-old – Jordan Fung's Pedosa Glass](#)   We have developed into Pedosa Innovation, a tech start-up founded by the developer of Pedosa Glass. We have continued to develop wearable technology, in addition to cloud infrastructure and STEM education programmes for kids in Hong Kong. Learn more at www.pedosa.org, or contact us at hello@pedosa.org....... Listed under: [Other Projects](#)
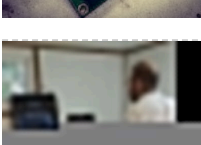
439. [Infrared Fighting Tank](#) https://youtu.be/XMgdvILuDaU This project is to make two infrared fighting tanks with Starter Robot Kits, some mechanical parts and electric modules. They are controlled with 2.4G wireless joystick. So, how to make it? Step 1: Parts Required 2 x Starter Robot Kit(Bluetooth or IR version) 4 x Beam0808-136-Blue 2...... Listed under: [Other Projects](#)

440. [Ultrasonic Mapmaker Using Arduino and MatLab](#) Vision is one of the most exciting senses you can endow on your robot. The ability to perceive obstacles allows a robot to make an educated decision regarding further movements. However, it is also not the easiest senses to implement for a few reasons. Firstly,...... Listed under: [Other Projects](#)

442. **Arduino Based Smart Home IOT System** Hello, I am Michalis Vasilakis from Ardumotive.com and in this Instructables guide I will show you how you can easily make your own smart home system based on Arduino uno and an Ethernet module (or shield). You will be able to use this system from any device...... Listed under: [Home Automation Projects](#)

443. **Arduino 101 Fundamentals** The purpose of this instructable is to introduce the sketch writing fundamentals to all new comers to the Arduino world. It is meant to be a beginners guide that includes detailed explanation about the basic statements and functions. Most of the sketches I use are...... Listed under: [LED Projects](#)

444. **Arduino – LCD 1602A I2C – PASSWORD PROTECTED DOOR ACCESS With Relay – KY-019** https://youtu.be/GnYi9Y2EIoc Hello world! Today i made a simple code to control a electric strike lock with a Password/ Access Code using a 1 channel relay. I don't have such a lock but i demonstrated it with a lamp attached to the relay. Check the next...... Listed under: [Other Projects](#)
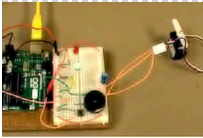
445. **How to Make the Knock Lock for Arduino Starter Kit** In this instructable i will be showing you a video on how I made a knock lock using the arduino uno starter kit. I did run into a few problems along the way but figured out a solution after thinking it over. this is the...... Listed under: [Security – Safety Projects](#)

446. **A Beginner's Guide to Arduino** After some years of experimenting with Arduino, I decided that the time has come to share the knowledge I've acquired. So I here it goes, a guide to Arduino, with the bare basics for beginners and some more advanced explanations for people who are somewhat...... Listed under: [Other Projects](#)
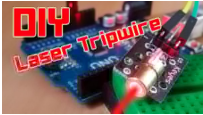
447. **DIY | Easy Arduino Laser Tripwire Security System!** https://youtu.be/X18CfOKtyTQ In this tutorial I will be teaching you how you can build your own Laser Tripwire Security System at home! You will need the following components and materials: LED lightLaser ModuleLaser Sensor ModuleSpeaker or Piezo Buzzer2 Small Breadboards with sticky tape on the backArduinoBreadboard...... Listed under: [Security – Safety Projects](#)

448. **Sound Detection RGB Lamp Using Arduino** Hello, In this project I am making a lamp with multiple colors using RGB leds. My idea is to try to let the lamp change color if it detects a sound in the area. If you get annoyed from the changing colors every time you...... Listed under: [Sound – Audio Projects](#)

449. **Joystick Controlled Robot Arm Using an Arduino** Purpose and description of this guide This instructable is a hand-in for a school project that we made. The purpose of this project was to create a robot arm control using thumbsticks. We had to use an Arduino Uno for the control and in addition,...... Listed under: [Robotics – Automation Projects](#)

450. **Handmade Claw** These 6 easy steps will tell you how to make a wooden claw machine controlled with Arduino. Step 1: Print All of Your Pieces Either handcut or laser cut all of your pieces Step 2: Aquire Your Parts You will need 4 SG90 servos, 4...... Listed under: [Other Projects](#)

451. **Arduino Countdown Timer With Setup Buttons** In this Instructables guide I will show you how to make your own Arduino two digit countdown timer. I made my own circuit by using the ATmega328 micro controller but this is an optional step. In this guide I will help you to make it...... Listed under: [Other Projects](#)
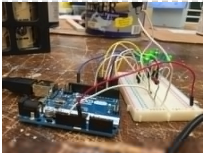
452. **Easy Arduino LED Dice** This instrcutable will show you how to hook up LEDs to show a face of a dice when a pushbutton is pressed. Step 1: Supplies For this project you will need to following: 11 long jumper wires 7 short jumper wires 7 LEDs 1 breadboard...... Listed under: [LED Projects](#)

453. **Arduino Robot Catapult** https://youtu.be/6cXrxevZAPs https://youtu.be/K3U2OlnTnME Hello there fellow makers, This instructable is my attempt to make a robot for the 'ROBOTICS CONTEST' competition in instructables. So here it is 🙂 I'll start this instructable with a joke 🙂 Q: what's the difference between men and boys?A : the...... Listed under: [Robotics – Automation Projects](#)
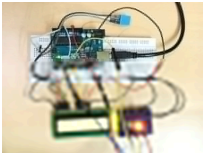
454. **Temp & Humidity Sensor With LCD Disp & LED Indicator** In this instructable, I have used the DHT11 Temperature & Humidity sensor & Arduino UNO to display the current temperature & humidity readings into a 16 x 2 LCD Display. Alongside, I have also created a 3-LED setup which indicates 3 sets of temperature readings (cold, hot, extreme). The DHT11 is a...... Listed under: [LED Projects](#)

455. **Automated Greenhouse** We decided to design a greenhouse as subject for our electronic project. The goal was to regulate the temperature inside the greenhouse thanks a lamp, a servomotor to open a window and a PC fan. We wanted to maintain a quite constant level of soil...... Listed under: [Home Automation Projects](#)

456. **Control LED Using IR Remote : Simple** Hello everyone, In this instructables we will control LED using IR remote. Step 1: Gather the Parts A breadboardA LEDA 220ohm resistorAn Arduino UNOA TSOP382 IR receiverSome jumper or hookup wires Step 2: Wiring Hookup all the

457.   [Sunlight Detection Alarm](#) Most technology Instructables are fun to construct, and often easy to build. This is one that shares those features, but also solves a practical problem we had. To prevent fading of furniture, carpet, and the wood flooring in our foyer, my spouse and I installed...... Listed under: [Sensor – Transducer – Detector Projects](#)
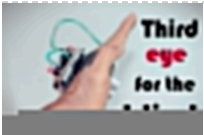
458.   [Arduino Motion Detection Simple Project](#) https://youtu.be/zs6RBEWrAcI This is a very basic tutorial for Arduino beginners , we tried to keep it simple and to the point, how to use PIR motion detection sensors and how to control LED based on the sensor outpu. and so simply put,The main idea of...... Listed under: [LED Projects](#)

459.   [Arduino: How to Build an Obstacle Avoiding Robot](#) This instructable is the written version of my "Arduino: How To Build An Obstacle Avoiding Robot" Youtube video that I've uploaded recently. I strongly recommend you to check it out. My YouTube Channel. Please Subscribe for Support So, without further ado, Let's get started !...... Listed under: [Robotics – Automation Projects](#)
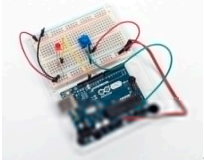
460.   [Using ESP-01 and Arduino UNO](#) In our previous tutorial, we learned how to set up the ESP8266 ESP-01 and establish communication with other devices. In this tutorial we are going to show how to use the ESP-01 module to give the Arduino UNO access to a Wi-Fi network and interact with inputs and outputs. Step 1: Materials The materials...... Listed under: [LED Projects](#)

461.   [THIRD EYE FOR THE BLIND – an Innovative Wearable Technology for Blinds.](#) - The first wearable technology for blinds - Using ultrasonic waves to detect the obstacles - Notifying the user through vibrations/buzzer sound Third eye for blinds is an innovation which helps the blinds people to navigate with speed and confidence by detecting the nearby obstacles...... Listed under: [Other Projects](#)

462.   [Sending Data From Arduino to Python Via USB](#) For several projects you might want to acquire some data from an Arduino board. There are several options and the one that I chose here uses the USB connection. I will explain how to store your data in a text file in order to plot...... Listed under: [Interfacing(USB – RS232 – I2c -ISP) Projects](#)

463.   [Read a Potentiometer With Arduino's Analog Input](#) https://youtu.be/-EDYMQ9lczA Let's learn how to read a potentiometer, a type of rotating variable resistor, using Arduino's analog input! We'll connect up a simple circuit using a solderless breadboard and use some simple Arduino code to control a single LED. So far you've learned to control LEDs...... Listed under: [Other Projects](#)

464.   [DIY – Automated Garden Irrigation – (Arduino / IOT)](#) This project will show you how to build an irrigation controller for a home garden. Capable of measuring soil moisture readings and activating irrigation from a garden tap if the soil becomes too dry. The controller also includes a temperature and humidity sensor. The controller...... Listed under: [Home Automation Projects](#)

465.   [How to Connect the ESP8266 NodeMCU to the IoT Cloud](#) This instructable shows you a simple Internet of Things demo using the ESP8266 NodeMCU and an online IoT service called AskSensors. We demonstrate you how to quickly get data from the ESP8266 HTTPS client and plot it in graph into the AskSensors IoT Platform. Step 1:...... Listed under: [Internet – Ethernet – LAN Projects](#)

466.   [Fish Feeder 2](#) Introduction / Why this project In 2016 I build my first fish feeder, see Fish Feeder 1. The feeder worked fine for more then half a year. After that period the servos were worn out, causing the program to halt, without sending an error-mail. Oops. I didn't...... Listed under: [Other Projects](#)

467.   [Peggy – Arduino Portable RF Rain Tracker](#) My country mild climate lets the sun to shine for the greatest part of the year, then tumble driers are not widely used and so we often use to drain clothes in the sun. What to do when a sudden rainfall comes? This project has...... Listed under: [Wifi - WLan Projects](#)

468.   [Home Automation Using Arduino With Wifi, Bluetooth and IR Remote Control](#) This is a tutorial to show how to build a home automation system using arduino with Wifi [ESP8266-01], bluetooth (HC-05) and IR remote control. Home automation results in a smarter home and is used to provide a higher and healthier standard of living. The beauty...... Listed under: [Home Automation Projects](#)

469.   [DIY | Ambilight Using Arduino Nano](#) In this Instructable I will be teaching you how you can create your own (b)ambilight for under $40!Keep in mind that the Ambilight will only work on a PC running the Bambilight software. You will need the following components: Individually addressable RGB LED strip - Available on AliexpressArduino...... Listed under: [LED Projects](#)

470.   [How to Use Water Flow Sensor – Arduino Tutorial](#) In this tutorial you will learn how to use one water flow sensor with an Arduino board. The water flow sensor consists of a plastic valve body, a water rotor and a hall-effect sensor. When the water flows through the rotor, rotor rolls and the...... Listed under: [Sensor – Transducer – Detector Projects](#)

471.   [Arduino Password Unlock Door Security System](#) Hello! In this Instructables guide I will show you how to make your own password unlock door system by using the Arduino uno board. I made my own circuit by using the ATmega328 micro controller but this is an optional step. In this guide I...... Listed under: [Security – Safety Projects](#)

472.   [Long Range, 1.8km, Arduino to Arduino Wireless Communication With the HC-12.](#) https://youtu.be/DGRPqeacJns In this instructable you will learn how to communicate between Arduinos over a long distance up to 1.8km in open air. The HC-12 is a wireless serial port communication module that is very useful, extremely powerful and easy to use. First you will learn...... Listed under: [Wireless Projects](#)

473.   [Arduino : How to Control Stepper Motor Via Bluetooth (with Smartphone)](#) This instructable is the written version of my "Arduino : How To

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This website uses cookies to improve your experience. We'll assume you're ok with this, but you can opt-out if you wish.   **ACCEPT**   **Check Privacy Policy**

YouTube Channel First, you should see the following Instructable: How to…... Listed under: [Phone Projects](#)

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474. [Head Mouse With MPU6050 and Arduino Micro](#) https://youtu.be/zsUDoa4-fQg Hi everyone, here it is my new project, a mouse controlled with the movement of the head!I decided to make this project once I received my accelerometer/gyroscope MPU6050 from IC Station, and I wanted to do something useful with this.Then I found out that…... Listed under: [Other Projects](#)

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475. [Arduino – Sound Sensor (with LED)](#) This instructable is the written version of my "Arduino - Sound Sensor (with LED)" YouTube video that I've uploaded recently. I strongly recommend you to check it out. My YouTube Channel Step 1: Tutorial https://youtu.be/setjiVH0_IY Sound sensors can be used for a variety of things,…... Listed under: [Sound – Audio Projects](#)

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476. [Gesture Controlled Robotic Arm Using Kinect & Arduino](#) This is a Simulink Model to Control a Robotic Arm By Gestures that are captured using Kinect. A Robotic Arm is developed using Servo Motors. Step 1: Things Used in This Project https://youtu.be/Z4z3K5SwySE Hardware components: Arduino Mega 2560Microsoft Kinect for Xbox 360Microsoft Xbox Kinect AdapterAdafruit…... Listed under: [Robotics – Automation Projects](#)

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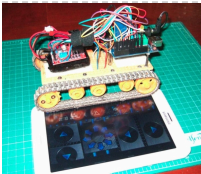
477. [Sparrow – My Assistant](#) https://youtu.be/wYEzNOmNGLA https://youtu.be/RWchc7x-J1s Hello everyone. I am a graphic designer with a restless soul (my site www.inoace.com). I loved doing electronics years ago and than got busy with life and job. I am now blessed with some time (rare now a days 😛). This is…... Listed under: [Other Projects](#)

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478. [The Interactive Donation Box](#) Donation boxes can be much more interesting and attractive when you combine them with electronics and a little bit of programming. This instructable will show you how to. As the name explains, making donation boxes interactive can help you gain much more attention and make…... Listed under: [Other Projects](#)

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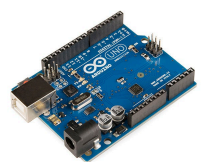
479. [Distinguish Walking and Running Using Machine Learning](#) Electronic market is full of devices called pedometer and fitness tracker. They counts the number of steps you have taken, distance you have covered, whether you are walking or running and bunch of other stuff. Ever wondered, how these devices perform such measurements. I decided…... Listed under: [Other Projects](#)

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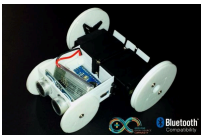
480. [Tracked Robot Bluetooth Controlled by Arduino Via Android Application](#) https://youtu.be/J3DwgZvD2js After trying to remote tracked robot by IR remote control.I have proceed to control same robot platform by Bluetooth Arduino controller via Android application.This method is more reliable,longer distance,pretty Android application enhancement. Same principle,low cost play and home level technical skill.Programming khownledge is not…... Listed under: [Bluetooth Projects](#)

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481. [Connecting "stuff" Via Bluetooth / Android / Arduino](#) A very good wireless local area network (and personal) is undoubtedly the Bluetooth (BT). Today in our day-to-day is common to find us using cell phones, stereos, cameras, etc., interconnected with the help of the famous "blue little light". In the world of IoT and…... Listed under: [Bluetooth Projects](#)

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482. [Voice to Arduino: Control LEDs Using MIT Speech Recognizer](#) Hello, everybody!!! It has been some time I had not updated my post here. Today I would like to share with you guys an experiment I made. I am going to control LEDs using MIT app inventor speech recognizer. Oh before I forget, I had…... Listed under: [LED Projects](#)

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483. [SparkRover – 3D Printed Smartphone Controlled Robot](#) Over the years, I have built several large robots using a custom-made robotics driver that I created called the SmartRover system. This driver was initially used for my SmartRover robot that I built which ran at a peak current of 60 amps at 24 volts……. Listed under: [Robotics – Automation Projects](#)

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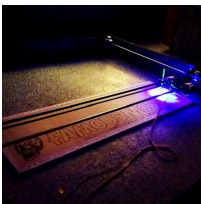
484. [Phone Controlled Computer Starter](#) https://youtu.be/QhhOxIe02Ok Have you ever wanted to start your computer while you are away from home to access some files? Or maybe you wanted to start a download of a new game, so that it would be done when you got home. This project will show…... Listed under: [Phone Projects](#)

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485. [Arduino Basics: Emulate Your Arduino Circuits Online](#) Want to make your arduino circuits online? want to test components with your code before buying? Then this is the right instructable for you. Lets start! Step 1: Open and Sign Up for 123D Circuits 1) Log on to 123D circuits and then make your…... Listed under: [Other Projects](#)

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486. [DIY Muscle Sensor / EMG Circuit for a Microcontroller](#) Measuring muscle activation via electric potential, referred to as electromyography (EMG) , has traditionally been used for medical research and diagnosis of neuromuscular disorders. However, with the advent of ever shrinking yet more powerful microcontrollers and integrated circuits, EMG circuits and sensors have found their…... Listed under: [Sensor – Transducer – Detector Projects](#)

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487. [3W 4'x4' Arduino Laser Cutter/Engraver](#) https://youtu.be/CbzY5ECsFuQ https://youtu.be/4ybdqgmePDs In this tutorial you will learn how to make your own 4 ft by 4 ft, Arduino controlled, 3 watt laser engraver / cutter (for thin materials) for around 300$. The main thing that separates this tutorial from other laser engraver tutorials on…... Listed under: [Other Projects](#)

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488. [Color Recognition Lock](#) There are a lot of ways that you can activate an electronic lock. You can use passwords, radio signals, or even voice commands. In this project, I am going to show you how to make a lock box that opens and closes based on color…... Listed under: [Security – Safety Projects](#)

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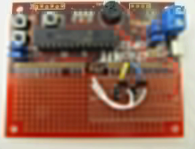
489. [3D Printed Robot](#) https://youtu.be/AJ1TfieZ6Dg The nice thing about 3D printing is that it makes building robots easy. You can design whatever configuration of parts that you can dream up and have them in your hand virtually right away. This allows for rapid prototyping and

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490. [Drawing Robot](#) https://youtu.be/bkCg6-8Zuf0 https://youtu.be/Laz_4UWLW6Q Please vote for Drawing Robot on this link. Thanx in advance Fixing my drawing incapability with my robotics skills and to me results were not that bad. Now I can at least save my self from humiliation in my drawing class. This project...... Listed under: [Robotics – Automation Projects](#)

491. [Motor Controllers for Cheap Robots](#) Hey! This I'ble is now out of date! I made an updated version which you can read here! Hope you find it fun and useful! ~~~~~ Thus far, I've shown you how to create wheels out of household items, severalmotorizedchassis out of cardboard, and a...... Listed under: [Motor Projects](#)

492. [Dark Sensor With LDR, Transistor and a LED](#) You wan't do a dark sensor with a LDR, one transistor and one LED and you don't know how to do it? In this small tutorial I will explain to you how you can do that even if you know only the basics of electronic....... Listed under: [LED Projects](#)

493. [How to Make a Remote Controlled Robotic Hand With Arduino](#) https://youtu.be/efO-ooyS-mo This is my school project for the 5th year of high school (I'm Italian, we have 5 years of high school). It consists in an artificial hand controlled by a glove with flex sensors. The artificial hand reproduces the movements of the hand with...... Listed under: [Robotics – Automation Projects](#)

494. [DIY Tilt Switch](#) In this instructable I'll show you how to make a simple tilt switch, this tilt switch works best with microcontrollers that can debounce the signal and overcome interferences produced by vibrations. There are many ways to make a tilt switch, this one is a cheap...... Listed under: [Other Projects](#)

495. [Nexus 7 and the Arduino.](#) Will show several ways to show how to use an Arduino as a sensor using The Nexus 7 for a terminal and to do development. This can be very important for protecting your electronic equipment especially servers.Note 1: All connections are to a standard Arduino...... Listed under: [Other Projects](#)

496. [Remote Controlled Robot](#) The purpose of this final project was to create a small mobile robot and control it via a wireless controller. To accomplish our goal, we decided to use the Arduino Uno microcontroller as the base for both the controller and robot. For the wireless functionality...... Listed under: [Robotics – Automation Projects](#)

497. [Das Blinken Bonken! an Arduino Ball Throwing Game Platform.](#) https://youtu.be/UPtVqJkY8N8 This is a fun and pretty easy project that I built as a Christmas present for my kid who loves throwing things. Watch the video to see what it can do. It's built out of a regular Arduino UNO, pressure sensors made from velostat,...... Listed under: [Game – Entertainment Projects](#)

498. [Arduino Assisted RC Truck/Car](#) Recently I dusted off my 7 year old Stampede 2wd, designed in 1996. I got it for my 8th birthday. The truck was great, but it had a few caveats. For example, if the truck ran out of range, battery was low, or the transmitter batteries...... Listed under: [Car Projects](#)

499. [KeySampler](#) This instrument was build by Lieven Menschaert and Danny Leen using an Arduino Uno and some hardware components (rotary encoder, potentiometer and simple iron bolts). The software running the actual audio and video is a Pure Data / GEM patch. Additionaly Echonest API was...... Listed under: [Other Projects](#)
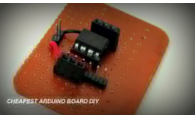
500. [Tidal Clock](#) This is a tutorial for making the Tidal Clock. The clock shows the ebb and flow between high and low tide by a rising and falling water level. It consists of an airtight acrylic container that has a front visible chamber and a back hidden...... Listed under: [Clock – Timer Projects](#)

501. [Pocket Laser Engraver.](#) I have been trying to get my hands on a laser cutter for some time but they always seem out of reach. All the great things that can be done with a real laser cutter tickle the imagination. I feel it's time to share my...... Listed under: [Other Projects](#)

502. [Arduino Uno Xylophone](#) This xylophone uses the Arduino Uno and a multiplexer to identify when one of eight keys are struck, and play that sound via midi sound on a computer. An optional part of the instructions also allows each key to light up with two LED lights...... Listed under: [Phone Projects](#)

503. [How to Make a Cheap Attiny Arduino Board](#) Well most of time i get troubled when i need Arduino in some projects where i need few I/O pinsWell thanks to Arduino-Tiny platformArduino program can be burned into the Avr-tiny Series like Attiny 85/45 Arduino-Tiny is an open source set of ATtiny "cores" for...... Listed under: [Other Projects](#)

504. [Edge 3D Printer 1.0 - an Affordable Open Source 3D Printer!](#) Hello everyone! In this instructable I will show you how to make a low cost 3d printer that I...

Low Cost 3D Printer
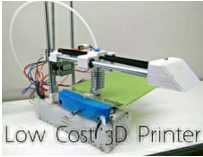
505.   [How to Control a Nixie Tube With an Arduino](#) A Nixie Tube is a Neon gas-filled tube, that has a wiremesh anode with various cathodes shaped like numbers or symbols. Back in the 1950s they were used in computers, calculators, and laboratory equipment. Nixie tubes were replaced by LEDs and VFDs(vacuum fluorescent displays)in the…… Listed under: [Other Projects](#)

506.   [WiFi Enabled Arduino – Interfacing With Web APIs](#) Are you familiar with Arduino, but are looking for a little more connectivity in your projects? This Instructable goes over a new (and cheap) wireless module that has hit the embedded world hard - the ESP8266. This little module is a perfect way to hook…… Listed under: [Wifi - WLan Projects](#)

507.   [Recycled Motherboard RC Quadcopter](#) My university had a bunch of old server motherboards that were headed to the dumpster. I decided to see the feasibility of turning them into something useful! Go ahead and grab the attached pdf plans, print them out full size, and build your own! Step…… Listed under: [Other Projects](#)

508.   [How to Make an Entire Drone/Multirotor and Camera Gimbal Using Laser Cut Parts](#) the photo you see was taken from my first ever copter which i built in 2 hours, what i had not mentioned was my first copter used a laser cut frame i designed and produced whilst in school.This difference between this post and my other…… Listed under: [Video – Camera – Imaging Projects](#)

509.   [Low-Cost, Arduino-Compatible Drawing Robot](#) https://youtu.be/Uo2aUUNhdKs I designed this project for a 10-hour workshop for ChickTech.org whose goal is to introduce teenage women to STEM topics. The goals for this project were: Easy to build.Easy to program.Did something interesting.Low-cost so participants could take it home and continue to learn. With…… Listed under: [Robotics – Automation Projects](#)

510.   [Arduino Watch Sport](#) I apologize if you find spelling errors or nonsensical text, my language is Spanish and has not been easy to translate, I will improve my English to continue composing instructables. In today's technology, especially electronics have come a long way, to the point that today…… Listed under: [Other Projects](#)

511.   [Simple LiDAR Using the Laser Rangefinder Uni-T UT390b, Arduino and Turbo Pascal](#) Some days ago I bought a laser rangefinder (Uni-T UT390b, f.e. http://www.dx.com/de/p/uni-t-ut390b-45m-laser-dist...) to realise a simple LiDAR. The rangefinder has an accuracy of +/- 2mm and is able to measure distances up to 45m. This will be enough for my living room 😉 You'll also…… Listed under: [Home Automation Projects](#)

512.   [Lie Detector and Biofeedback Arduino Based](#) This tutorial will explain how to build a machine for biofeedback. But first a bit of theory. What is biofeedback? [Font: Wikipedia | https://en.wikipedia.org/wiki/Biofeedback] Biofeedback is the process of gaining greater awareness of many physiological functions primarily using instruments that provide information on the activity of…… Listed under: [Other Projects](#)

513.   [The Dream Machine Or, How to Be More Awake While You Sleep](#) This is an inexpensive, DIY, Arduino-powered oneironautics device that allows users to alert themselves when they are in a deep dreamstate, without waking up. In other words, this machine will tell you when you are dreaming, while you are dreaming. Why is this such a big…… Listed under: [Other Projects](#)

514.   [DIY Arduino 3D Laser Scanner](#) FabScan is an open-source, do-it-yourself 3D laser scanner.It started out as a Bachelor's thesis by Francis Engelmann, supervised by René Bohne. You can find official project here. I made my own box from MDF hood sheets and use different hardware parts.I decided to make this guide…… Listed under: [Other Projects](#)

515.   [Control TV With Any Phone (Even Phones Without IR Blaster)](#) Do you want to control your TV and several other gadgets that are IR controlled? Ya but my phone doesn't support it because it doesn't have an IR blaster.Don't worry here a gadget that gives IR control to any phone and the thing it needs…… Listed under: [Phone Projects](#)

516.   Arduino Meets MIT App Inventor   [Course on MIT App Inventor and Arduino](#) I have made many tutorials for creating apps using MIT app inventor and connected the app with arduino to make things work, I often get email stating something went missing when they follow my tutorial, Here's a step by step tutorial on getting started with…… Listed under: [Motor Projects](#)

517.   [Use the Force... or Your Brainwaves? (multifuctional Thought Controlled System)](#) As a kid I always wanted to have a special ability, like moving objects with thoughts or flying. I tried to move objects with "the power of my mind" of course with no success. Well, yes, I was and I am a huge Star Wars…… Listed under: [Home Automation Projects](#)

518.   [Arduino Bluetooth Basic Tutorial](#) Ever thought of controlling any electronic devices with your smart phone ?Controlling your robot or any other devices with your smartphone will be really cool. Here is is a simple and basic tutorial for interfacing Bluetooth with arduino Step 1: Things You Need Hardware Bluetooth Module HC 05/06ArduinoLED220Ω ResistorAndroid device…… Listed under: [Bluetooth Projects](#)
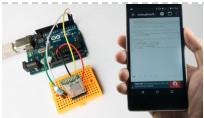
520. [Car Dash Tablet](#) Putting a tablet in car dash.This project was on my mind for a long time.Somehow I couldn't find any free time to build this project. But now I have done it and I'll tell you how. My car is a VW Polo (2014) and...... Listed under: [Car Projects](#)
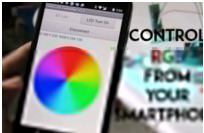
521. [Using NXT Components With a Micro Controller](#) This is a guide to using the motors and sensors from the LEGO NXT set with a Parallax Basic Stamp II or BS2. However, rather than just providing schematics and sample code for the BS2, I'll be providing some theory on how the sensors work...... Listed under: [Other Projects](#)

522. [Program Your Arduino With an Android Device Over Bluetooth](#) Hello world, in this Instructable I want to show you, how to program your Arduino Uno with your Android device over Bluetooth. It is very simple and so cheap. Also it allows us to program our Arduino where ever we want over wireless bluetooth... So...... Listed under: [Bluetooth Projects](#)

523. [DIY Standalone Weather Station Powered by Arduino](#) Hello Makers out there Again this is not a Step by step Instructable . Like always i forgot to take take snaps since the inception of this project.The idea of Building a community weather station using Open hardware Kicked a long back. We people from...... Listed under: [Sensor – Transducer – Detector Projects](#)

524. [SmartPhone Controlled RGB MOOD Light](#) Mood lamps are always fascinating for me and is a very good project for starters to start with Arduino. What is a Mood Lamp ? Mood lamps are lighting devices that are used to establish a particular feeling or mood within a room. In some...... Listed under: [Phone Projects](#)
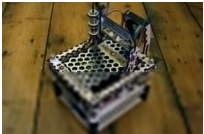
525. [DIY CNC for 60$ (Large Work Area)](#) Hi there I've been here after a long time, and this time I've made a huge project as compared to my earlier ones. This is a full-sized 250 mm X 300 mm work area CNC machine and more interesting things is that it was made...... Listed under: [CNC Machines Projects](#)

526. [Make an Optical Disk Display](#) Every curious how DVDs work? Interested in learning some simple analog electronics? This Instructables will show you how to make an optical disk display project in only a few hours. What is an optical disk? An optical disk stores data/information and can be read or...... Listed under: [LED Projects](#)

527. [How to Work With Conductive Fabric](#) Working with conductive fabric is fun and it's ideal for wearables, soft circuitry, e-textiles and other projects that take advantage of it's properties. Learning the basics will help you make design and material choices tailored to your application. This Instructable is jam-packed with insights from...... Listed under: [LED Projects](#)

528. [The MicroSlice V1 | a Tiny Arduino Laser Cutter](#) A few years ago I saw an Instructable where Groover had used a pair of DVD-RW drives to make a pocket laser engraver. Inspired by the idea, driven by the recent purchase of a full-sized 50 watt CO2 laser cutter, and roused by the launch of the Microcontroller contest I took...... Listed under: [Other Projects](#)
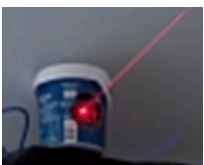
529. [The Nerd Watch](#) Hello! Welcome to another Other Machine project tutorial! I'm Sam DeRose, a former Other Machine Co. Summer Intern. I created the Nerd Watch last summer while working at OMC. The Nerd Watch displays the time in binary when the button is pushed. The watch shows the...... Listed under: [Clock – Timer Projects](#)

530. [Intro to LED Strips](#) https://youtu.be/IbkUL7U1qIA LED strips are a very fun and effective way to give lots of glow and color to a project. In this Instructable you will learn about the basic kinds of strips and how to hook them up to the Intel Edison with Arduino breakout...... Listed under: [LED Projects](#)

531. [Arduino: CNC Machine / Part 2](#) Hey guys this is part 2 of my Arduino CNC machine! Thanks to you guys you motivated me to make my next part into building this! This is me building the y-axis on the CNC machine. Hope you guys enjoy! Step 1: Patreon As you...... Listed under: [CNC Machines Projects](#)

532. [Smartphone Controlled Cat Laser](#) https://youtu.be/Q05TAoPIHtQ I've been wanting to start exploring the world of microcontrollers and programming for some time now, so I came up with this simple project which uses an app called "Blynk" to allow you to wirelessly control an Arduino board through your wifi. Now obviously...... Listed under: [Phone Projects](#)

533. [How to Make a Cheap Arduino MIDI Controller](#) I'm a huge fan of technology and music, but when I decided to start making my own electronic music, I was discouraged by the high price of MIDI keyboards and controllers. After a lot of tinkering, I saw the opportunity to create my own MIDI...... Listed under: [Sound – Audio Projects](#)

534. **"With U Smart Sole" DIY GPS Embedded Smart Shoe Sole #MITBetterWorld** What do you do when someone is chasing you or you are lost? Cross your fingers? Don't. When you are in trouble, just cross your feet [in a special way] and your location is sent to your family members. Wait there's more! Even the family can get your location just...... Listed under: **GPS Based Projects**

535. **DIY Multi Featured Robot With Arduino** This robot was mainly built for understanding Arduino and combining various projects of Arduino to form a Multi Featured Arduino Robot. And further, who doesn't want to have a pet robot? So I named it BLUE ROVIER 316. I could have bought a beautiful tracked...... Listed under: **Robotics – Automation Projects**

536. **Arduino XMAS Hitcounter** Christmas is coming closer, so here is my contribution to put you in the right mood. It is a blog hitcounter, that rings a bell. Literally. It puts a smile on your face, every time someone hits your blog. It consists of an Arduino board,...... Listed under: **Motor Projects**

537. **Arduino Charliplexed Heart, Just in Time for Valentines Day.** Here is an Arduino controlled Charliplexed LED heart just in time for Valentine's Day. It uses a total of 6 wires to controll the 27 LEDs. A PIC or AVR could easily be used for this, but I have Arduinos lying around and they are...... Listed under: **LED Projects**

538. **Drumming MIDI Glove Using Arduino and Light Sensors** I will describe a fun and easy way to build your own sound expression MIDI enabled glove without expending lot's of money on MIDI Interfaces or expensive sensors. Feel free to contact me directly by mail if you like it or have suggestions. This project...... Listed under: **Sensor – Transducer – Detector Projects**

539. **DIY Bare Minimum Arduino Mega 2560** [2017 Update] Eagle files please click here. The objective of this project is to create a version of Arduino Mega 2560 board that has lower component count and smaller board size. Personally to be used for robotics projects that require ATmega2560's 256 KB flash and digital/analog...... Listed under: **LED Projects**

540. **How to Make Your Own Professional Arduino Sheld** In this instructable I will show you how to make your own professional looking arduino shield. In the proses of designing the arduino shield I will use eagle.cad, arduino software & viewplot. First step in making a arduino shield is thinking of what you want...... Listed under: **Arduino Programmer Projects**

541. **Arduino Radio** https://youtu.be/3WbK-S2WDLQ Update 16.04.2015 just thought how would a "cool" kit look a like, so I get an altoids tin box eat all the thinks inside and put all necassary parts inside. 😉 a new project from good old Germany. I got some of those very...... Listed under: **Radio Projects**

542. **Serial Communication – Arduino and Linkit One** In this instructable I'm going show you how to establish serial communication between the arduino and the Linkit One. This would help you make a more complex project with these two boards. Step 1: Components Here is a list of all the components required to...... Listed under: **Arduino Programmer Projects**

543. **Salvaging Liquid Crystal Displays (LCDs)** Almost all electronics have some sort of human interface, from blinking lights and beeping speakers to seven segment alphanumeric and Liquid Crystal Displays. This Instructable is about salvaging and testing Liquid Crystal Displays, and a couple tricks I know to make salvaging them more successful....... Listed under: **LCD Projects**

544. **Datalogger With Temperature Sensor and Photoresistor** In this project I'm going to create a simple Datalogger with my Arduino and an Ethernet shield.I'll be using a photoresistor and a temperature sensor and all the information will be stored in a micro SD card.The idea is that you can apply this to...... Listed under: **Sensor – Transducer – Detector Projects**

545. **Arduino Sprinkler Valves + Wifi + Twitter** This is my first post so... be brutal ! I have a small yard with a very odd shape, well... L-shaped really and not enough pressure at the tap to be able to water it in one go. So I had to create 3 sprinkler...... Listed under: **Wifi - WLan Projects**

546. **Simple Audio Amplifier** In most cases first project in electronics for beginners is building simple audio amplifier. That is because it requires small number of elements and not a lot of knowledge to build one. For low power amplifiers we could use integrated circuits like TDA family. But...... Listed under: **Sound – Audio Projects**

547. **Use Arduino Code on a TI Launchpad MSP430** You can now use Arduino sketches to program your TI Launchpad MSP430. The video show me programming an Arduino Mega 2560 and a TI Launchpad MSP430 with the same Arduino sketch. https://youtu.be/-KKmkwHapSw The TI Launchpad MSP430 is a microprocessor
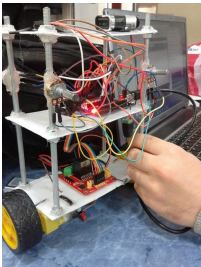
548.   [Arduino Lock Bar...sorta](#) This project was tough but nothing worth doing is easy and i am ver proud that i was able to accomplish what i did. To know that my skills are further than they once were is a reward on their own.......but how did i get...... Listed under: [Security – Safety Projects](#)

549.   [Panner With Arduino](#) This project it's a new time-lapse tripod or panning with two axis that works with an arduino protoboard. Everyone will be able to create their own time-lapse trajectory without need to check it. With the arduino code we'll can change the value for the movement...... Listed under: [Motor Projects](#)

550.   [Arduino Self Balancing Robot](#) In this project I will describe the construction of robots standing in equilibrium with Arduino.We explained in our previous version of the android controlled project. In this project we will move to our control. Let's go let's get to our building project. Step 1: Materials:...... Listed under: [Robotics – Automation Projects](#)

551.   [Arduino Insight -Beginner LED'S and (Binary Counter 16 Bit)](#) Hello friends...!!! This is my first tutorial on Instructables, in this tutorial I'm going to show you* Write a simple program for glowing LED* Group of LED program* Explain analog output (PWM)* Create a simple project of (4 bit binary counter).Small BIO:Friends we know that...... Listed under: [LED Projects](#)

552.   [Arduino Project in 5 Minutes](#) https://youtu.be/qdnoPGi0sR8 In the following Instructable, we'll show you how you can make your next Arduino project in just 5 minutes. It's simple, easy and fun. Step 1: Plan It! 1. Go to Circuito.io 2. Select the components in the screenshot, add a description and your...... Listed under: [Arduino Programmer Projects](#)

553.   [Controlling a MIDI CC in Ableton Live With an Arduino Uno](#) https://youtu.be/rx75N4OZCsk In this instructable we will use a potentiometer on an Arduino Uno to control a MIDI CC in Ableton Live. A MIDI CC stands for Continuous Controller, i.e. a number in the range from 0 to 127 inclusive to modulate something with. In the youtube I...... Listed under: [Internet – Ethernet – LAN Project Ideas](#)

554.   [Giant Arduino GEMMA Side Table](#) They're always serving up something hot at Adafruit. Make this giant Arduino GEMMA side table to use as a platform for various purposes. I needed a small utility table next to my BBQ grill so I made this. Enjoy afternoon tea or cappuccino outdoors in...... Listed under: [Home Automation Projects](#)
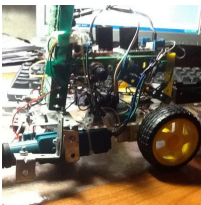
555.   [Arduino Ethernet Camera](#) I will introduce a Arduino ethernet Camera. You can take a picture inside of house which have a this arduino ethernet camera by just openning the web site if you follow this contents. It is very easy and simple way which don't need any app....... Listed under: [Video – Camera – Imaging Projects](#)

556.   [Arduino Controlled CNC / 3D Printer Hybrid](#) The objective of this instructable is to guide your way throw the entire making process of building a BuildersBot machine. An open design Arduino Controlled CNC Router that can also perform 3D printing. The instructions will cover all areas such as design, mechanics, electronics and...... Listed under: [CNC Machines Projects](#)

557.   [Arduino Robot](#) first of all, i am sorry if i have grammar mistakes, i am asian and i am 13 years old, i study arduino by my self (mostly my self) and this is my first project and also my first instructables. this is the robot that...... Listed under: [Robotics – Automation Projects](#)

558.   [Arduino-Using Shift Registers With Ultrasonic Sensors](#) The HC-SR04 Ultrasonic range sensing module is great for sensing distances that can be used as an input for your Arduino projects, but using multiple (more than two) can quickly cost you a lot of pins. This basic Instructable gives you the code and basic...... Listed under: [Sensor – Transducer – Detector Projects](#)

559.   [Turn Signal Biking Jacket](#) This tutorial will show you how to build a jacket with turn signals that will let people know where you're headed when you're on your bike. We'll use conductive thread and sewable electronics so your jacket will be soft and wearable and washable when you're...... Listed under: [Internet – Ethernet – LAN Projects](#)

electromagnet to mechanically switch electric appliances.A relay can…… Listed under: [Home Automation Projects](#)

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561.   [Automated Plant Watering System](#) House Plant Babysitter Going away from a while? Need something to babysit your house plants?This box will automatically deliver an adjustable volume of water to four plants (or less) every day, or once every "x" day (up to seven days). A micro controller handles the…… Listed under: [Home Automation Projects](#)

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562.   [The Maven Box: an Arduino Controller for Software Developers](#) Every job has it's routine. I am a software developer who works with a Git/Maven based workspace everyday. So when I start working, my daily routine is to update and build my local workspace, pulling changes from GitHub, execute a maven build and execute the…… Listed under: [Development Board – Kits Projects](#)

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563.   [Arduino Type K Temperature Indicator](#) There are lots of Arduino projects to read temperature with different devices, this is an easy one to measure high temperatures with type K thermocouples (1300ºC).Skills necessary for this project are basic (buying max IC already mounted) but I have mount an MAX31855 in a…… Listed under: [Temperature Measurement Projects](#)

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564.   [Synesthesia Mask](#) https://youtu.be/9vLSuLL9xLA Inspiration What if I told you that 2+2=Red!?!? What!?! I know this sounds crazy but for people with synesthesia this might be their reality. Synesthesia is defined as "the production of a sense impression relating to one sense or part of the body by…… Listed under: [Sensor – Transducer – Detector Projects](#)

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565.   [Environmental Alert System](#) https://youtu.be/gWZ6Z1ptUis What's that smell? It's noxious gas of course! If you're in an environment where there's a possibility of gaseous release of which you'd rather not breathe, why not build an automatic system for sensing and alerting you? The design for the Environmental Alert System…… Listed under: [Security – Safety Projects](#)

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566.   [Intro to GPS With Microcontrollers](#) https://youtu.be/_Qog6ofGD5Y Once the purview of strictly military operations, GPS has become a regular part of modern living and in relatively short time! Who wouldn't want want to know when and where they are anywhere on the planet? It's a science fiction dream brought into reality,…… Listed under: [GPS Based Projects](#)

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567.   [Arduino Ping Pong Ball Cannon](#) https://youtu.be/XOybUHFUD8o Overview: This instructable uses a Trossen Robotics Pan and Tilt kit to construct an Arduino controlled ping pong ball cannon. The project also uses several other components from Trossen Robotics including a medium solenoid, a relay and various items from one of their Robotics Grab Bags. A joystick controls the…… Listed under: [Sound – Audio Projects](#)

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568.   [Simple Arduino-based Thermometer](#) Building an Arduino project isn't just about making all the components talk to one another. It's about creating an actual object or prototype out of your small creation, and giving it that extra touch that makes it unique. For this next project, we took some…… Listed under: [Temperature Measurement Projects](#)

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569.   [LED Matrix Controller Using 4Duino](#) In this project, we will use the digital pins and screen of the 4Duino to create a 5×7 LED matrix controller with a user graphical interface. https://youtu.be/fSCNCFmbSJc An LED matrix is essentially many LEDs packaged in a dot grid format in order to produce pictures…… Listed under: [LED Projects](#)

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570.   [Arduino Sunflower – an Electronic Sundancer](#) Maker is always sensitive to the new and funny things. One day, I watched a video, in which the sunflower moves along with the sun. I had a sudden insight then. Why can't I make a electronic device inmitating this biomechanism. In the following days,…… Listed under: [Solar energy projects](#)

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571.   [B-SENSOR: DIY PRESSURE CUSHION](#) This project examines how interface pressure is a key risk factor in the development of pressure ulcers. Visual feedback of continuous interface pressure between the body and support surface could inform clinicians on repositioning strategies and play a key role in an overall strategy for…… Listed under: [Sensor – Transducer – Detector Projects](#)

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572.   [JolliCube (8x8x8 LED Cube) With MD_Cubo Library](#) So far, we have only built 3 LED cubes. Our first cube is a 4x4x4 LED cube and though we managed to successfully complete it without too much difficulty, we did not find much excitement and satisfaction experimenting with it. Next, we designed, created and…… Listed under: [Arduino LED Project Ideas](#)

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573.   [DIY | RGB LED Shades Controlled by Arduino](#) Today I'm going to teach you how you can build your own RGB LED Glasses very easily and cheapThis has always

574.   [Which MICROCONTROLLER for Your ELECTRONIC FASHION?](#) What Does Fashion Lack? "Microcontrollers" I always answer - and it's TRUE! It makes your garments SO much more interesting, interactive and communicative as soon as you add some INTELLIGENCE to it. But which ones are on the market? I started a little research on…… Listed under: [Bluetooth Projects](#)

575.   [How to Use the Adafruit Flora Board – Arduino Tutorial](#) In this tutorial you will learn how to use the Adafruit Flora board and how you can easily program it with Codebender! FLORA is Adafruit's fully-featured wearable electronics platform. It's a round, sewable, Arduino-compatible microcontroller designed to empower amazing wearables projects. The FLORA family also…… Listed under: [LED Projects](#)

576.   [VU Meter – LED Noise-o-Meter for Classrooms](#) I built this a short while ago as an idea to use in a primary classroom setting. Poster displays are often used by primary teachers wanting to control the noise levels in their classrooms but I wanted to add technology to make it dynamic and…… Listed under: [LED Projects](#)

577.   [Web-Based Pool Controller W/ Raspberry Pi, Arduino, Xbee and Digital Thermometer](#) This simple system allows web based remote control of a swimming pool pump and heater, or any device that be switched with simple relays. It uses a Raspberry Pi as the main controller and web server. It also uses a remote thermometer run by an…… Listed under: [Radio Project Ideas](#)

578.   [Arduino Experiments (Supersize Instructable)](#) Masses if not all Arduino Experiments done my way,that being everyone carry's out experiments different to the next person,as such this instructable will have alot of videos,and pictures as well as detailed descriptions of each experiment what I did how and why….LARGE INSTRUCTABLE BE WARNED!(there are…… Listed under: [Arduino LED Project Ideas](#)

579.   [Arduino Uno R3 Battery Tester](#) This simple project is intended to help you in answering the lifelong question "Does this battery have any juice left?". Although popularity of single cell batteries (such as AA, AAA, C and D cell) is diminishing, there are still many small devices like TV remotes,…… Listed under: [Arduino Battery Project Ideas](#)

580.   [Program Arduino Pro Mini Using Arduino Uno](#) Hello everyone. Today I am going to show how to program arduino pro mini using arduino uno. If you already had a arduino uno and you newly buy arduino pro mini then you don't need to buy the USB to serial converter to program the…… Listed under: [Arduino Programmer Projects](#)

581.   [Arduino Xylophone](#)   I made a xylophone that uses an Arduino Mega to detect when a note is struck, and generate MIDI output. This project is wondeful because I essentially made a xylophone, a drumkit, and any other MIDI controlled sound instrument, with one tool. The following…… Listed under: [Internet – Ethernet – LAN Projects](#)

582.   [Arduino Is Slow – and How to Fix It!](#) Arduino is slow? What? This instructable will show just how slow a part of Arduino is, and how to fix it. It's true – more specifically, Arduino's digitalWrite command takes a considerable amount of time. If you are just switching on a LED once or…… Listed under: [Arduino LED Project Ideas](#)

583.   [Arduino Nano to Arduino Uno Adapter](#) Arduino Nano is a nice, small and cheap member of the Arduino family. It is based on the Atmega328 chip, what makes it as powerful as the biggest his brother Arduino Uno, but it can be obtained for less money. In Ebay now Chinese versions…… Listed under: [Arduino Programmer Projects](#)

584.   [Arduino LED Exploration](#) Arduino LED ExplorationMy program shows you all of the data on your Led from the first light to the normal operation light. From that data you can pick an RS that is good light, but lower in current. You must build the circuit to run…… Listed under: [LED Projects](#)

585.   [LilyPad Arduino Painted Canvas With Music and Lights](#) This is a project that I created for my Children and Technology class that I am taking in my Masters of Library Science Program. This was one of my first experiences with coding so this was a trial and error process but this instructable should…… Listed under: [Sound – Audio Projects](#)

586.   [Getting started with Python and Arduino MKR1000 for secure IoT projects](#) Arduino MKR1000 meets Python With the release r2.0.7, Zerynth adds another board

functionality of an Arduino Zero (already supported by Zerynth) and the connectivity of a Wi-Fi Shield,...... Listed under: [Electronics News Updates](#), [Sensor – Transducer – Detector Project Ideas](#)

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587. [Arduino-Controlled 12V Battery Charger](#) The circuit presented here can automatically charge a 12V, 7Ah battery, or above. Special features of the charger are as follows. It automatically controls the charging current as per the status of the battery. Battery voltage level as well as charging status are indicated on...... Listed under: [Battery Projects](#)

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588. [12-Multi National Digital Clock on Arduino UNO](#) The presence of 12-Multi-National Digital clocks is very common at the lobby / front desk of star hotels, showing time & dates of several countries where from most of the guests to arrive to stay at the hotel. One common feature of these clocks is...... Listed under: [Clock – Timer Projects](#)

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589. [Arduino-Based Coil Winding Temperature Recorder and Alarm Generator](#) Monitoring the temperature of a transformer or electric motor winding involves data acquisition. This project is developed to monitor the temperature of an electric motor and a transformer with high accuracy, incorporating display and alarm facility. This circuit can be installed near a transformer winding...... Listed under: [Clock – Timer Projects](#), [Temperature Measurement Projects](#)

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590. [Arduino-Based MOSFET Terminal Identification System](#) Metal oxide semiconductor field effect transistor (MOSFET) is a semiconductor device widely used for switching applications and amplifying electronic signals. While the facility to determine the type and pin configuration of bipolar junction transistors (BJTs) are available in digital multimeters (DMMs) used in the laboratory,...... Listed under: [Development Board – Kits Projects](#)

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591. [DC Panel Meter using Arduino](#) Panel meters in regulated power supplies are used to display electrical parameters like voltage and current. Presented here is a circuit to display DC voltage and current of power supplies, including DIY-type ones. Circuit and working Circuit diagram of the DC panel meter using Arduino...... Listed under: [Metering – Instrument Projects](#)

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592. [Issue Printer](#) Print Github issues on paper and stack them on your desk. Every time you close an issue and you can literally "bin" it! Things used in this project Hardware components Arduino MKR1000 × 1 Thermal Printer × 1 Software apps and online services Arduino Web...... Listed under: [Internet – Ethernet – LAN Projects](#), [Sensor – Transducer – Detector Projects](#)

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593. [Image Processing Based Fire Detection & Extinguisher System Using Arduino](#) This is an image processing based fire detection and extinguisher system using Arduino. It is basically the system is divided into two parts: Fire detection 2. Fire alert and extinguisher In the first part, fire detects using image processing. Here in this project I'm using...... Listed under: [Sensor – Transducer – Detector Projects](#)

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594. [Indoor Air Quality Monitoring System](#) An indoor air quality monitoring system for detecting toxic gases. Things used in this project Hardware components Arduino Yun Shield & Genuino Yun Shield × 1 Arduino Leonardo × 1 Arduino Yun × 1 Arduino MKR GSM 1400 × 1 Arduino MKR WAN 1300 ×...... Listed under: [Sensor – Transducer – Detector Projects](#)

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595. [LED Straw XMAS Tree](#) A simple, original and cheap Christmas tree made with LED-illuminated plastic straws that can be controlled over WiFi. Things used in this project Hardware components Arduino MKR1000 × 1 USB-A to Micro-USB Cable × 1 LED (generic) × 12 Resistor 330 ohm × 12 Software...... Listed under: [LED Projects](#)

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596. [Light Animations Using Arduino and MATLAB](#) Light animations are visually appealing and hence widely used for advertising purposes. In this project, we present a MATLAB-based graphical user interface (GUI) approach to control the glowing pattern of a number of light-emitting diodes (LEDs). Use of GUI is advantageous since the user can...... Listed under: [LED Projects](#)

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597. [Gesture-Controlled Robot](#) A gesture-detecting wearable sleeve that can direct a robot in different directions. Things used in this project Hardware components Arduino MKR1000 × 1 Arduino Motor Shield × 1 Arduino UNO & Genuino UNO × 1 Adafruit BNO055 × 1 Li-Ion Battery 1000mAh × 1 AA...... Listed under: [Robotics – Automation Project Ideas](#), [Sensor – Transducer – Detector Project Ideas](#)

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598. [Snowbuddy](#) Snowman replica that can chat with user to inform them whether outside temperature is safe for outdoor activity or not. Things used in this project Hardware components Arduino MKR1000 × 1 DHT22 Temperature Sensor × 1 Jumper wires (generic) × 1 Software apps and online...... Listed under: [Sensor – Transducer – Detector Projects](#), [Temperature Measurement Projects](#)

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599. [BLUE P: Wireless Arduino Programming Shield](#) Many times we make projects using Arduino, while working with it we need to connect it with PC to upload program using USB cable. In this tutorial, I'm going to replace this USB cable with a wireless programming shield. This shield is build using a...... Listed under:

600.   [Light your Bike, and use your Phone to Control It](#) Arduino, NeoPixels, Firmata, and a Windows Phone (picked one up for $30 bucks) to control lighting. Things used in this project Hardware components Arduino MKR1000 × 1 SparkFun Bluetooth Modem - BlueSMiRF Silver × 1 Adafruit NeoPixel Digital RGB LED Strip - White 30 LED...... Listed under: [LED Projects](#), [Projects](#)

601.   [RFID Door Unlock](#) Forgot your keys? Unlock the door using an RFID combination sequence from hidden tags. Things used in this project Hardware components Arduino MKR1000 × 1 Adafruit Metro Mini × 1 Adafruit Lockitron × 1 RFID reader (generic) I used a RFID-RC522 from ebay × 1...... Listed under: [Home Automation Projects](#), [Projects](#)

602.   [Interfacing a Laser LED with Arduino](#) This project turns on and turns off a laser LED after every second. It can also monitor its own supply voltage level. The circuit can be extended for use as an audio-visual alarm system for security applications. Keyes KY-008 laser transmitter module is available at...... Listed under: [LED Projects](#)

603.   [Stylish IoT Neck Warmer Controlled from Mobile Browser](#) The IoT version of a stylish neck warmer directly coming from this year's Fashion Weeks rolled into London, Paris and New York. Things used in this project Hardware components Arduino MKR1000 × 1 Alligator Clips × 1 Jumper wires (generic) × 1 Adafruit NeoPixel Digital...... Listed under: [LED Projects](#), [Projects](#)

604.   [Multi-Sensor Data Plotting using Arduino IDE](#) Monitoring of various process variables such as temperature, pressure, viscosity, humidity, pH and flow-rate is very important in steel plants, petrochemical and other such industries. The human-machine interface (HMI) at the operator station displays a continuous and real-time trending of process variables on a monitor...... Listed under: [Sensor – Transducer – Detector Projects](#)

605.   [Teleoperated Robot for Sensing the Toxic Gases](#) Remotely operated ground vehicle for sensing the toxic gases which is helpful for firefighters and researchers. Things used in this project Hardware components Arduino Yun × 1 Arduino MKR1000 × 1 Seeed Grove - Air quality sensor v1.3 × 1 Seeed Grove - Gas Sensor(MQ2)...... Listed under: [Projects](#), [Robotics – Automation Projects](#)

606.   [Green Light: Fashion](#) Ever wanted feedback on your new haute couture? Sprinkle a little IoT magic and get immediate critique on your fashion success or failure. Things used in this project Hardware components Arduino MKR1000 × 1 Adafruit NeoPixel Ring: WS2812 5050 RGB LED × 1 Software apps...... Listed under: [LED Projects](#), [Projects](#)

607.   [GPS Clock using Arduino](#) Global positioning system (GPS) synchronised clocks give accurate time. These clocks are universal and commonly used at railway stations, bus stands and airports. These are widely used for military purposes too. Here we describe a GPS clock based on Arduino Uno R3—an AVR ATmega328-based microcontroller...... Listed under: [Clock – Timer Projects](#), [GPS Based Projects](#)

608.   [Interrupts Debouncing with Zerynth (Python for IoT)](#) In this tutorial, we'll see the advanced feature of interrupt debouncing using Zerynth. Things used in this project Hardware components Arduino MKR1000 × 1 Jumper wires (generic) × 1 Software apps and online services Zerynth Studio Story [embed]https://youtu.be/iX2AlezDPVE[/embed] https://www.youtube.com/watch?v=iX2AlezDPVE&feature=youtu.be In this tutorial, we'll use PWM...... Listed under: [Projects](#), [Tutorials](#)

609.   [Smart Plastic Container](#) A special container for store objects, iot-ready. It is able to keep track of stocks stored inside and notify when stocks are low! Things used in this project Hardware components SparkFun hx711 × 1 Adafruit Standard LCD - 16x2 White on Blue × 1 Arduino...... Listed under: [Projects](#), [Sensor – Transducer – Detector Projects](#)

610.   [Optical Theremin Musical Instrument Using Arduino Uno Board](#) Theremin is an early electronic musical instrument controlled without physical contact by the thereminist (performer). It is named after the Russian inventor, Léon Theremin, who patented the device in 1928. A typical theremin musical instrument is shown in Fig. 1. This article explains how you...... Listed under: [Game – Entertainment Projects](#)

611.   [Smart City Project](#) Open source air quality sensor network platform. Things used in this project Hardware components Arduino MKR1000 × 1 PMS5003 dust sensor × 1 Breadboard (generic) × 1 Male Header 40 Position 1 Row (0.1") × 1 SparkFun Snappable Protoboard × 1 Software apps and online...... Listed under: [Projects](#), [Security – Safety Projects](#), [Sensor – Transducer – Detector Projects](#)

612. [Pick to Light Project 2 WiFi](#) In the second project in my pick to light, I am using WIFI to pass the data between PC and Arduino. Things used in this project Hardware components Arduino MKR1000 × 1 LED (generic) × 2 Jumper wires (generic) × 1 SparkFun Pushbutton switch 12mm...... Listed under: [Projects](#), Wifi -

613. [Arduino-based Front Office Visitor Alarm](#) This Arduino based visitor alarm is useful for offices, clinics and shops. It alerts you to the entry of a visitor by producing a beep sound every time the door is opened. The alarm automatically switches off after a few seconds. Circuit and working Circuit...... Listed under: [Clock – Timer Projects](#)

614. [Azure Stream Analytics saving lives!](#) Azure Stream Analytics watches sensors, control device autonomously, send Tweets and alerts in case of a hazard. Controllable by smartphone. Things used in this project Hardware components Arduino MKR1000 × 1 SparkFun Graphic LCD 84x48 - Nokia 5110 × 1 Texas Instruments LM2596 DC-DC 4.5-40V...... Listed under: [Projects](#), [Security – Safety Projects](#)

615. [Hackable Christmas Greeting Card](#) In this post we will make a cool Christmas greeting card with the possibility of changing the music and much more, with Cayenne IoT. Things used in this project Hardware components Arduino MKR1000 × 1 LED (generic) × 1 Buzzer × 1 Jumper wires (generic)...... Listed under: [How To – DIY – Projects](#), [Projects](#)

616. [Control your Human-Like Robot from Anywhere you Are!](#) Buto is my 'real steel' robot project. Now, BuTO has been connected to the Internet and can be controlled remotely. Things used in this project Hardware components Arduino MKR1000 × 1 Arduino UNO & Genuino UNO × 1 Dynamixel Servo MX-64T × 2 Dynamixel Servo...... Listed under: [Projects](#), [Robotics – Automation Projects](#)

617. [Using IoT to Remotely Control a Robotic Arm](#) Controlling a robotic arm to pick up and drop objects is difficult enough, without IoT it would be near impossible to do this remotely. Things used in this project Hardware components Arduino MKR1000 × 1 Software apps and online services MATLAB Arduino IDE Hand tools...... Listed under: [Projects](#), [Robotics – Automation Projects](#)

618. [DC Motor Starter Using Arduino Uno Board](#) Motor starter reduces the load, torque and current surge of a motor during startup. On starting, the motor takes more than five times the normal running current. This overheats the motor's armature winding and creates a sudden voltage dip in the power supply, which can...... Listed under: [Motor Projects](#)

619. [Singing Arduino](#) Would you like to surprise someone with a song? Things used in this project Hardware components Arduino MKR1000 × 1 Buzzer × 1 5 mm LED: Red × 1 5 mm LED: Green × 1 Resistor 330 ohm × 1 Story Would you like to...... Listed under: [Game – Entertainment Projects](#), [Projects](#)

620. [SD Sketch Update](#) How to use the new Arduino SDU library for SAMD boards to update the sketch on your board, putting it on an SD! Things used in this project Hardware components Arduino MKR1000 × 1 Arduino MKR Zero × 1 Arduino SD card × 1 Software...... Listed under: [LED Projects](#), [Projects](#)

621. [Interfacing Multiple LCDs With Arduino](#) Here we describe interfacing of three 16×2 LCDs with common data lines to an Arduino Uno board. Four data lines of all the three LCDs are connected to digital pins of the Arduino Uno board but data displayed on each LCD is different. Circuit and...... Listed under: [LCD Projects](#)

622. [Arduino NeoPixel Wifi](#) An application to rule the neopixels all. Things used in this project Hardware components Arduino MKR1000 × 1 Adafruit NeoPixel Ring: WS2812 5050 RGB LED × 1 Story I love LEDs but as much as I love them, you have to manually pull the color...... Listed under: [LED Projects](#), [Projects](#), [Wifi - WLan Projects](#)

623. [Notification of Orders in Tindie](#) When you have a new order in Tindie your Arduino warn you. Things used in this project Hardware components Arduino MKR1000 × 1 LED (generic) × 1 Software apps and online services Tindie API Arduino IDE Hand tools and fabrication machines Laser cutter (generic) Story...... Listed under: [How To – DIY – Projects](#), [Projects](#)

624. [Arduino Based Digital IC Tester Using MATLAB](#) Testing of digital electronic systems generally involves applying a set of test stimuli to inputs of the device-under-test (DUT) and analyzing responses of the system using a response analyzer. If the DUT generates correct output responses (also called the golden response) for all the input...... Listed under: [Development Board – Kits Projects](#)

625. [Home Temperature while you're on holiday ...](#) When you are out of your home for Christmas Holiday you can visualize the Temp and Humidity values by your

626. [Controlling A Linear Actuator With An Arduino](#) There is a wide application of linear actuator where one wants to move something but they do not want to physically get involved in moving it. There are quite a number of ways to control linear actuators depending on the application and the user experience…… Listed under: [Development Board – Kits Projects](#)

627. [Seat Monitor](#) Using ARTIK cloud to monitor cabin seat state. Things used in this project Hardware components Arduino MKR1000 × 1 Realtek Ameba RTL8195 Board × 1 ControlEverything.com Piezo Sensor × 1 Seeed Grove - Piezo Vibration Sensor × 1 Software apps and online services Samsung ARTIK…… Listed under: [Projects](#), [Sensor – Transducer – Detector Projects](#)

628. [Tack your Gait!](#) Everyone has a certain Gait-Rythtm! ..influenced by architecture and our surrounding. This Project should Tack your Gait and find yours. Things used in this project Hardware components Velostat, Linqstat × 1 SparkFun Bluetooth Modem - BlueSMiRF Silver × 1 Coppertape (narrow) × 1 cork 2mm…… Listed under: [Bluetooth Projects](#), [GPS Based Projects](#), [Projects](#), [Sensor – Transducer – Detector Projects](#)

629. [Generic STM32 board with Arduino](#) Described here is a simple way to load a program without bootloader. An additional thing needed is a USB to Serial/UART/TTL adapter (3.3V level). Connect the USB to Serial board as follows, and power up the STM32 board from a USB port/power supply. • RXD…… Listed under: [Development Board – Kits Projects](#)

630. [Spartan WiFi Pager System](#) Simple Wifi pager system. Things used in this project Hardware components Arduino MKR1000 × 1 Adafruit Standard LCD - 16x2 White on Blue × 1 Story This project is an initial stage of the Spartan WIFI pager system (https://www.hackster.io/challenges/arduino-microsoft-maker/ideas/2421). First step in this stage is…… Listed under: [Projects](#), [Wifi - WLan Projects](#)

631. [Telegram Bot Library](#) Host a Telegram Bot on your Arduino and chat with your brand new IoT device! Things used in this project Hardware components Arduino MKR1000 × 1 Software apps and online services Arduino Web Editor Story Learn how to use the Telegram Bot library, host a…… Listed under: [Projects](#), [Tutorials](#), [Wifi - WLan Projects](#)

632. [Arduino based Smartphone Controlled Robot Car](#) Nowadays smartphones can be used to control a host of electrical and electronic devices including motors, music systems and lights. Here we present an Arduino based robot car, which can be controlled using an Android smartphone having ArduinoRC application installed in it. This bot receives…… Listed under: [Robotics – Automation Projects](#)

633. [IoT4Car (2)](#) ObdiiUartMkrShield is a socket board for Arduino MKR board to talk with vehicles through ODB-II interface. Things used in this project Hardware components Arduino MKR1000 × 1 OSH Park Custom fabricated PCB × 1 Sparkfun - OBDII to DB9 cable × 1 Software apps and…… Listed under: [Car Projects](#), [Projects](#)

634. [Simple Water Quality Analysis](#) An easy-to-build and low-cost water quality monitor. Things used in this project Hardware components Arduino MKR1000 × 1 Jumper wires (generic) × 5 Resistor 4.75k ohm × 2 Gold-Plated Pin × 7 Breadboard (generic) × 1 Software apps and online services Arduino IDE Story After…… Listed under: [Metering – Instrument Projects](#), [Projects](#)

635. [PC-based Oscilloscope Using Arduino](#) Oscilloscopes are an essential tool for electronics hobbyists and professionals to verify that their designs would work as expected. PC-based oscilloscopes score over standalone oscilloscopes due to their compact size, low cost and ability to do offline analysis. Here we describe how you can make…… Listed under: [Interfacing(USB – RS232 – I2c -ISP) Projects](#)

636. [Christmas Presents Intruder Detector](#) See when your kids move their presents! Detector sets off an audio alarm and sends an alert directly to your phone! Things used in this project Hardware components Arduino MKR1000 × 1 Solderless Breadboard Half Size × 1 Jumper wires (generic) × 1 Adafruit Piezo…… Listed under: [Home Automation Projects](#), [Projects](#), [Sensor – Transducer – Detector Projects](#)

637. [Arduino Environmental Monitoring](#) Periodically measure environmental conditions and send them to WolkAbout IoT Platform to monitor the environment remotely. Things used in this project Hardware components Arduino MKR1000 × 1 MikroElektronika Environment click × 1 Software apps and online services Arduino IDE WolkAbout IoT Platform Hand tools and…… Listed under: [Projects](#), [Sensor – Transducer – Detector Projects](#)

638. [RFID Based Access Control Using Arduino](#) RFID is a non-contact, automatic identification technology that uses radio signals to identify, track, sort and detect a

639. [Smart Connected Open Source Pot (Scopot)](#) A Smart Pot that has all the component inside of the pot and gives the light and humidity data to the web Things used in this project Hardware components Arduino MKR1000 × 1 Solid State Relay × 1 Jumper wires (generic) × 1 Breadboard (generic)…… Listed under: [Other Projects](#), [Projects](#)

640. [IoT Cloud – Getting Started](#) Get familiar with the Arduino IoT Cloud and take your first steps into the world of connected objects. Things used in this project Hardware components Arduino MKR1000 A MKR1010 is also a perfect option, or you could use a MKR IOT Bundle (see below) ×…… Listed under: [Internet – Ethernet – LAN Projects](#), [Projects](#), [Tutorials](#)

641. [Arduino Based Programmable Digital Data Display](#) LCDs are widely used in applications like token-display machines in smalls and supermarkets, order number displays in restaurants and café, and so on. The project presented here demonstrates the working of Arduino based message display on LCD using Bluetooth. Circuit and working This circuit uses…… Listed under: [Development Board – Kits Projects](#)

642. [Keep Me Clean](#) A sensor That detects when a diaper needs changing. Things used in this project Hardware components Arduino MKR1000 × 1 Story A Methane Sensor attached to an Genuino mkr1000 sends notifications to Azure when poop (methane) is detected for a period of time. Schematics Device…… Listed under: [Projects](#), [Sensor – Transducer – Detector Projects](#)

643. [Solar UPS controller/automatic transfer switch](#) Get your essential appliances off the grid with just one solar panel Things used in this project Hardware components Particle Spark Core × 1 Arduino Nano R3 × 1 Arduino MKR1000 × 1 Story [UPDATE] Now using MKR1000 to control the UNplug unit I replaced…… Listed under: [Development Board – Kits Projects](#), [Projects](#)

644. [Arduino Based RGB Colour Code Generator](#) Red, green and blue (RGB) are the basic colours for generatingvarious other colours by mixing colours in a particular proportion. This technique is used in TVs, mobiles etc. Similarly, Web designing using HTML or any other language requires the hex code of a particular colour…… Listed under: [LED Projects](#)

645. [IOT Lighted Xmas Tree](#) Do you want to conserve energy and turn the Christmas tree lights on/off when not required? In IOT era, that can be done using MKR1000. Things used in this project Hardware components Arduino MKR1000 × 1 PowerSwitch Tail II × 1 Software apps and online…… Listed under: [Projects](#), [Tutorials](#)

646. [RGB Infinity Mirror with 3D Magnetic Sensor](#) An infinity mirror with an RGB LED strip that can change its color using Infineon's 3D magnetic sensor knob connected to an Arduino MKR1000. Things used in this project Hardware components Infineon 3D Magnetic Sensor 2Go × 1 Arduino MKR1000 × 1 Darlington High Power…… Listed under: [LED Projects](#), [Projects](#)

647. [Humidity And Temperature monitoring Using Arduino With The IoT](#) Using the Internet of Things (IoT) in homes and industries it is possible to control any electrical or electronic equipment. Moreover, you can get the information from any sensor and analyse it graphically or in any user-defined format from anywhere in the world. The IoT…… Listed under: [Sensor – Transducer – Detector Projects](#)

648. [Scheduled Relays](#) This project will show you how to schedule to drive the outputs on a MKR Relay Proto Shield using a MKR1000! Things used in this project Hardware components Arduino MKR1000 × 1 Arduino MKR Relay Proto Shield × 1 Software apps and online services Arduino…… Listed under: [Projects](#), [Tutorials](#)

649. [WiFi Robot](#) I have created the framework for WiFi and voice control of a robot. The MKR1000 chip enables us to receive controls over WiFi. Things used in this project Hardware components Arduino MKR1000 × 1 DC motor (generic) × 2 Wheels × 1 SparkFun Dual H-Bridge…… Listed under: [Projects](#), [Robotics – Automation Projects](#), [Wifi - WLan Projects](#)

650. [Wi-Fi Controlled Robot Using Arduino UNO And Blynk](#) This Wi-Fi controlled robot can be controlled from anywhere using the ARMA IoT shield for UNO and the Blynk App which provides the user interface.   Overview Simple WiFi Controlled Robot Using ARMA IoT and Blynk! This project uses an Arduino Uno connected…… Listed under: [Wifi - WLan Projects](#)

651. [Worlds First Remote Control Human](#) This project will allow you to control someone through the internet using the MKR1000 and Electric Muscle Stimulation also known as EMS. Things used in this project Hardware components General Purpose Transistor NPN × 2 Arduino MKR1000 × 1 Icy Hot Smart Relief Back and…… Listed under: [Medical – Health based Projects](#), [Projects](#)

652. [Salt Warehouses Monitoring with Arduino & Artik Cloud](#) In this Article i will demonstrate how to connect Arduino MKR1000 with Artik Cloud & monitor salt/Dairy warehouses Temperature & Humidity. Things used in this project Hardware components Arduino MKR1000 × 1 DHT22 Temperature Sensor × 1 Jumper wires (generic) × 3 Breadboard (generic) ×...... Listed under: [Projects](#), [Temperature Measurement Projects](#)

653. [DIY: Arduino Chatting](#) Networking is the one of the most important mean of communication used to communicate with people who are connected to one. Most of the available network communication modules in the market are not affordable by the overall end users. Considering this problem, a prototype has...... Listed under: [How To – DIY – Projects](#)

654. [Intel Edison as Azure IoTHub gateway](#) Using Intel Edison as gateway and redirecting data from Arduimo MKR1000 to Microsoft Azure IoTHub. Things used in this project Hardware components Intel Edison × 1 Arduino MKR1000 × 1 Software apps and online services Microsoft Azure Arduino Web Editor Story Background Workshop project during...... Listed under: [Internet – Ethernet – LAN Projects](#), [Projects](#)

655. [IoT Christmas Tree Topper](#) A cool star decoration for Chritmas Trees powered by Arduino MKR1000 Things used in this project Hardware components Arduino MKR1000 × 1 3 mm LED: Yellow × 16 Resistor 221 ohm × 4 Jumper wires (generic) × 8 Female header 8 position 2 row (2*4)...... Listed under: [Projects](#), [Tutorials](#)

656. [Road to Santa Claus](#) Waiting for Santa? Count down to his arrival with this MKR1000 device. Things used in this project Hardware components Arduino Road to Santa Claus Kit × 1 Software apps and online services Arduino IDE Arduino Web Editor Hand tools and fabrication machines Vinyl glue Hot...... Listed under: [GPS Based Projects](#), [Projects](#), [Sensor – Transducer – Detector Projects](#)

657. [Wide Range Alarm System](#) This is an alarm system based on the MKR1000 and a raspberry pi 2 or 3. The system will detect different alarms and notify you if necessary. Things used in this project Hardware components Arduino MKR1000 × 1 Raspberry Pi 2 Model B × 1...... Listed under: [Home Automation Projects](#), [Projects](#)

658. [Arduino as AVR Programmer](#) For my project I need two Arduino boards, but I have only one Arduino Mega 2560 board (refer Fig. 1). I can either buy an Arduino Uno board (that costs approx. Rs. 1400 in India) or I can make an Arduino board using a fresh...... Listed under: [Development Board – Kits Projects](#)
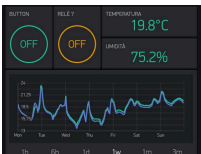
659. [GoPRO Shutter](#) Make your own custom GoPRO shutter using a MKR1000 board, 3 buttons and 3 LEDs. Things used in this project Hardware components Arduino MKR1000 × 1 LED (generic) × 3 SparkFun Pushbutton switch 12mm × 3 Breadboard (generic) × 1 Jumper wires (generic) × 1...... Listed under: [LED Projects](#), [Projects](#), [Tutorials](#)

660. [Holiday Wreath Automation](#) Automate your holiday wreath using an Arduino MKR1000, NeoPixels, and a buzzer. Get notified via SMS/email when someone is at the door. Things used in this project Hardware components Arduino MKR1000 × 1 NeoPixel strip × 1 Buzzer × 1 Breadboard (generic) × 1 Jumper...... Listed under: [Home Automation Projects](#), [Projects](#)

661. [My Home1000 Holiday Things for HOME Automation & Control](#) Remotely we control our home with MKR1000 and IOT of Blynk. We can manage the boiler, the 'anti-theft irrigation, open the Automatic Gate. Things used in this project Hardware components Arduino MKR1000 × 1 DHT11 Temperature & Humidity Sensor (4 pins) × 2 SparkFun BMP180...... Listed under: [Home Automation Projects](#), [Internet – Ethernet – LAN Projects](#), [Projects](#)

662. [Build An Arduino-Based Shadow Alarm](#) Shadow alarms are usually used for protection against theft. A shadow alarm is a device that sounds an alarm when a shadow falls on it. Described here is a simple circuit of an Arduino-based shadow alarm. This compact shadow alarm unit is capable of sensing...... Listed under: [Clock – Timer Projects](#)

663. [Control a Lamp with MKR Relay Proto Shield](#) Set an alarm with MKR1000 and MKR Relay Proto Shield to turn a lamp on/off. Things used in this project Hardware components Arduino MKR Relay Proto Shield × 1 Arduino MKR1000 × 1 Desktop Lamp × 1 Hand tools and fabrication machines Adafruit Wire Strippers...... Listed under: [Clock – Timer Projects](#)

664. [Arduino Piggyback on Raspberry Pi](#) Arduino is a perfect mindless slave. Give it a job and it performs the task endlessly without defaulting even for a nano second. On the other hand, Raspberry Pi, or Raspi, is a computer that has a brain of its own. But, it may falter...... Listed under: [Sensor – Transducer – Detector Projects](#)

665. [Temperature Logger With Arduino And Artik Cloud](#) Sending temperature from Arduino MKR1000 to Artik Cloud. Things used in this project Hardware

666. [My XL Wireless Photo Wall – PictureLED](#) A project utilizing the mkr1000 and 960 ws2812b to display a picture on the wall, you take a photo with the smartphone and you can see it! Things used in this project Hardware components Arduino MKR1000 × 1 WS2812B x 60 1M led strip ×...... Listed under: [LED Projects](#), [Projects](#)

667. [Designing Smart Chatbot with IoT for home automation with videos (Hindi & English)](#) In this project, we will be using ESP8266 12e manufactured by Lolin to make a Chatbot that can control our home applications. To chat with our chatbot, we will use Facebook messenger platform. Also, we will integrate some AI into our chatbot using Chatfuel. It will...... Listed under: [Home Automation Projects](#)

668. [Web Enabled 4 Wheeled Robot using a Photon](#) Expanding upon MKR1000 based Robot project, I created this 4 wheeled Robot. Things used in this project Hardware components Particle Photon × 1 Adafruit Basic Robot Kit × 1 Amazon Web Services L298N × 1 Adafruit DC Motor in Servo Chassis × 4 Adafruit Wheels...... Listed under: [Projects](#), [Robotics – Automation Projects](#)

669. [Mini Christmas IoT Show!](#) Handmade MKR1000 IoT Christmas show made of colored cardboard paper. Things used in this project Hardware components Arduino MKR1000 × 1 DFRobot DFPlayer × 1 Speaker: 0.25W, 8 ohms × 1 LED (generic) × 10 Servos (Tower Pro MG996R) × 4 Software apps and online...... Listed under: [LED Projects](#), [Projects](#)

670. [Logging Sensor Data in MS EXCEL through MATLAB GUI](#) The measurement and analysis of process parameters such as temperature, flow, conductivity, speed, viscosity, and stress play a crucial role in providing information about the process/system under consideration. Parameter values are logged into a computer (using a process called data acquisition) and acquired data is...... Listed under: [Sensor – Transducer – Detector Projects](#)

671. [Christmas Tree Water Level via Cayenne and MKR1000](#) When you have a 'real' Christmas tree, it is important to keep it watered. This project monitors the water level and emails alerts. Things used in this project Hardware components Arduino MKR1000 × 1 water level sensor × 1 LED (generic) × 4 Resistor 220...... Listed under: [Projects](#), [Sensor – Transducer – Detector Projects](#)
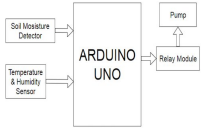
672. [With your Smart Phone and Arduino MKR1000 Blink a LED](#) The idea is to test the Arduino MKR1000, controlling the on board LED from your smart phone (this case iPhone SE. Hacksterlive Bogota. Things used in this project Hardware components Arduino MKR1000 × 1 Apple iPhone × 1 Software apps and online services Snappy Ubuntu...... Listed under: [LED Projects](#)

673. [Implementing serial communication in embedded systems](#) Serial communication was once the most widely used method of transferring data between computers. Many computing devices that you have used over time employ serial communication. Some of the terms associated with this type of data transfer are FTDI chip, COM interface, the RS232 protocol,...... Listed under: [Interfacing(USB – RS232 – I2c -ISP) Project Ideas](#)

674. [IoT Node with STM32F4 Discovery, MKR1000 and Azure IoT Hub](#) With MKR1000 and Azure IoT Hub, STM32F4 Discovery Board is used to send acceleration and other random telemetry data to Azure IoT Hub. Things used in this project Hardware components STMicroelectronics STM32F407G-DISC1 × 1 Arduino MKR1000 × 1 Software apps and online services AdaCore GNAT...... Listed under: [Internet – Ethernet – LAN Projects](#)

675. [Dual sharing RTC](#) Necessity I have an old window AC at my lab, situated at the terrace. The AC needs to be run intermittently more so often when I'm out of the station and the lab PC needs to be cooled down during the intense noon time when...... Listed under: [Development Board – Kits Projects](#)

676. [Simulate GPS/Read Photoresistor with MKR1000/ADAFRUIT](#) "ADAFRUIT IO" makes IoT for everyone. Here we publish the data from a photo-resistor and a simulated GPS. Things used in this project Hardware components Arduino MKR1000 × 1 Photo resistor × 1 Resistor 1k ohm × 1 Software apps and online services Arduino IDE...... Listed under: [GPS Based Projects](#), [Internet – Ethernet – LAN Projects](#)

677. [Smart Irrigation System](#) This project is based on the AEIOU heuristic framework of Design Engineering Approach. Design for Performance, Safety and Reliability is ensured in terms of segregation of the low voltage and the high voltage parts of the circuit. Design for Manufacturability and Assembly is ensured in...... Listed under: [Irrigation Projects](#)

678. [Hello World with Arduino/Genuino MKR1000: Relay Board and AP](#) Not the simple "Hello World" app but a semi-serious play with the MKR1000. Things used in this project Hardware components Arduino MKR1000 × 1 Relay (generic) × 1 Story I won a MKR1000 at the Hackster contest and I got it on my mailbox so...... Listed under: [Other Projects](#)

679. [Control MeArm Robot With MKR1000 And Your Smartphone](#) This project allows you to control a MeArm Robot with your smartphone, as if you had many potentiometers in your hands. Things used in this project Hardware components Arduino MKR1000 × 1 Arduino UNO & Genuino UNO × 1 Adafruit Standard LCD - 16x2 White…… Listed under: [Robotics – Automation Projects](#)

680. [Tiny Wi-Fi Switch for $3](#) Out of curiosity, I ordered the tiny ESP8266 relay switch from aliexpress.com but never knew it could be so embarrassing to find the right way to operate. The vendor said that the switching program is inbuilt and I only have to use some android phone…… Listed under: [Wifi - WLan Projects](#)

681. [IoT Wine-Tender-Arduino MKR1000!](#) This circuit serves a wine using a mini water pump all controlled from your phone. Enjoy it during your holidays! Things used in this project Hardware components Arduino MKR1000 × 1 DC motor (generic) × 1 SparkFun Dual H-Bridge motor drivers L298 × 1 Software…… Listed under: [CNC Machines Projects](#), [Motor Projects](#)

682. [Monitor fridge with Arduino MKR1000 and thethings.iO](#) To assure that your beer (and other) beverages are at a cool temperature, today we show you how to remotely monitor your fridge! Things used in this project Hardware components Arduino MKR1000 × 1 Temperature sensor DS18B20 × 1 Jumper wires (generic) × 3 Hand…… Listed under: [Metering – Instrument Projects](#), [Temperature Measurement Projects](#)

683. [Smallest IoT Home Automation using ESP8266 – 01 with Videos (Hindi & English)](#) In this project, we will be using the ESP8266 – 01 Wi-Fi Development board to make asmall home automation that has Wi-Fi featured in it. The system operates on a local web server and is easy to use for the novice. With this project, we…… Listed under: [Home Automation Projects](#)

684. [Temperature Monitoring with Arduino MKR1000 and ARTIK Cloud](#) Setup an Arduino MKR1000 board to read temperature data and send those readings to ARTIK Cloud for monitoring. Things used in this project Hardware components Arduino MKR1000 × 1 Temperature Sensor × 1 Software apps and online services Samsung ARTIK Cloud for IoT Story This…… Listed under: [Temperature Measurement Projects](#)

685. [Control your MKR1000 with aREST Framework](#) You can control your MKR1000 remotely with a RESTFUL interface. Things used in this project Hardware components Arduino MKR1000 × 1 LED (generic) × 2 Resistor 220 ohm × 2 Jumper wires (generic) × 5 Software apps and online services Arduino IDE Story It would…… Listed under: [LED Projects](#)

686. [Home Automation using Bluetooth of ESP32 with Videos (Hindi & English)](#) In this project, we will be dealing with the inbuilt Bluetooth feature in ESP32 Development board and try to build an application around it. https://youtu.be/zZUs_GRprpY The Bluetooth system can be divided into two different categories: Classic Bluetooth and Bluetooth Low Energy (BLE). ESP32 supports dual-mode Bluetooth,…… Listed under: [Home Automation Projects](#)

687. [Arduino MKR1000 & Thinger](#) A simple Internet of Things experiment, using an Arduino MKR1000 board to control two LEDs and monitor a potentiometer, via Thinger.io. Things used in this project Hardware components Arduino MKR1000 × 1 LED (generic) × 2 Rotary potentiometer (generic) × 1 Breadboard (generic) × 1…… Listed under: [Internet – Ethernet – LAN Projects](#), [LED Projects](#)

688. [Arduino MKR1000 & Favoriot](#) A simple IoT experiment, using an Arduino MKR1000 board to monitor a potentiometer and DHT11 sensor via Favoriot IoT platform. Things used in this project Hardware components Arduino MKR1000 × 1 DHT11 Temperature & Humidity Sensor (4 pins) × 1 Rotary potentiometer (generic) × 1…… Listed under: [Internet – Ethernet – LAN Projects](#)

689. [Arduino MKR1000 & Blynk](#) A simple Internet of Things experiment, using an Arduino MKR1000 board to control two LEDs and monitor a potentiometer, via Blynk app. Things used in this project Hardware components Arduino MKR1000 × 1 LED (generic) × 2 Rotary potentiometer (generic) × 1 Breadboard (generic) ×…… Listed under: [LED Projects](#)

690. [IoT and Touch-Based Home Automation with Video (Hindi & English)](#) We have seen various applications of IoT but what about adding the touch to it. In this project, we will add simple touch buttons to the ESP-32 Wi-Fi module. https://youtu.be/C4kWwcpaJFE ESP-32 is a great module to design IoT applications and adding touch to it will make…… Listed under: [Home Automation Projects](#)

691. [Arduino Mkr1000 and Java Swing Shooting Game](#) Arduino Mkr1000 + Uno + Leonardo + Java = Christmas shooting game. Things used in this project Hardware components Arduino UNO & Genuino UNO × 1 Arduino Leonardo × 1 Arduino MKR1000 × 1 3.7V battery × 1 HC-06 Bluetooth Module × 2 Arcade Button…… Listed under: [Game – Entertainment Projects](#)

692. [Internet of Things (IoT) LED Lamp with Video (Hindi & English)](#) In this project, we handle the output pin of ESP32 for switching and dimming a DC LED lamp using a local Web server. For a local Web server, we do not need an Internet connection; we can handle everything over Wi-Fi. To make this work, we use…… Listed under: [LED Projects](#)

693. [Arduino MKR1000 + Android + Relay = Christmas gift lock](#) Santa is here but you need to guess your gift's password! It's a great starting point if you're new to Arduino MKR1000, networking & Android Things used in this project Hardware components Arduino MKR1000 × 1 LED (generic) × 1 Jumper wires (generic) × 1...... Listed under: [Phone Projects](#), [Wifi - WLan Projects](#)

694. [Arduino MKR1000 Kit](#) Best in Class Arduino MKR1000 Controller. Things used in this project Hardware components Arduino MKR1000 × 1 Software apps and online services Arduino IDE Arduino MKR1000 Kit - Android Apple Arduino MKR1000 Kit - iOS Story This tutorial will focus on how to control and...... Listed under: [Phone Projects](#)

695. [Vehicle Tracking System Based on GPS and GSM](#) Presented here is an Arduino-based vehicle tracking system using global positioning system (GPS) and global system for mobile communication (GSM) modules. GSM modem with a SIM card used here uses the communication technique of a regular cellphone. The system can be installed or hidden in...... Listed under: [Sensor – Transducer – Detector Projects](#)

696. [Arduino MKR1000/Zero Neopixel Throwie](#) A WiFi controlled NeoPixel display. Designed for the MKR1000 but should work for the Zero too. A little rough around the edges but works! Things used in this project Hardware components Arduino MKR1000 × 1 Adafruit NeoPixel Ring: WS2812 5050 RGB LED × 1 Adafruit...... Listed under: [LED Projects](#)

697. [DogWatcher (MKR1000)](#) This is MKR1000/Windows 10 based device to keep your dog out of areas he should not be in by sounding an alarm and taking his photo. Things used in this project Hardware components Arduino MKR1000 × 1 Raspberry Pi 2 Model B You can use...... Listed under: [Sensor – Transducer – Detector Projects](#)

698. [ARTIK + MKR1000 + DHT11 + MQTT](#) An IOT app which make uses of ARTIK Cloud, Genuino MKR1000, DHT11 temperature and humidity sensor and MQTT protocol. Things used in this project Hardware components Arduino MKR1000 × 2 DHT11 Temperature & Humidity Sensor (4 pins) × 1 LED (generic) × 2 Software apps...... Listed under: [Other Projects](#), [Sensor – Transducer – Detector Projects](#)

699. [4x4x4 RGB LED Cube](#) This article describes how to build a 4x4x4 RGB LED CUBE (Fig. 6) that is controlled by Arduino. Cube construction We need 64 common cathode RGB LEDs for our cube. Test all LEDs before soldering. Bend all the leads out 90 degrees apart as shown...... Listed under: [LED Projects](#)

700. [Arduino MKR1000 – DHT – Artik cloud](#) Sending temperature and humidity from Arduino MKR1000 to Artik Cloud Things used in this project Hardware components Arduino MKR1000 × 1 DHT11 Temperature & Humidity Sensor (4 pins) × 1 Software apps and online services Samsung ARTIK Cloud for IoT Arduino IDE Story Background This...... Listed under: [Development Board – Kits Projects](#), [Other Projects](#)

701. [IoT Power Tracker for Your Home](#) The power tracker is an IOT based device that helps us to keep track of our power consumption. It also alerts us when we are exceeding the power usage limit. With this device, we don't have to wait until the end of the month to...... Listed under: [Home Automation Projects](#)

702. [Arduino MKR1000 Weather Station](#) Weather station monitors temperature, pressure, light, dust, soil moisture values and displays on the OLED screen and Cayenne dashboard. Things used in this project Hardware components Arduino MKR1000 × 1 Adafruit TSL2561 Luminosity Sensor × 1 Adafruit BMP180 Barometric Pressure/Temperature × 1 OLED display I2C...... Listed under: [Development Board – Kits Projects](#), [Projects](#)

703. [MKR1000 Message of the Day](#) Use Arduino MKR1000 and a LCD to set the message of the day.   Things used in this project Hardware components Arduino MKR1000 × 1 Adafruit Standard LCD - 16x2 White on Blue × 1 Software apps and online services Arduino IDE Story I wanted...... Listed under: [Arduino LCD Project Ideas](#), [Other Projects](#)

704. [Iot Home Automation Using ESP-32 with Videos (Hindi & English)](#) Back in earlier days, when the word Internet of Things (IoT) was not a sound bite, developers of this field used various Wi-Fi shields to enable the Wi-Fi feature in their development boards. Following this, in 2014, the low-cost Wi-Fi enabled chip ESP-01 caught everyone's...... Listed under: [Home Automation Projects](#)

705. [MKR1000 With Windows 10](#) Arduino MKR1000 with Windows 10 remote Arduino using Wifi connection. Things used in this project Hardware components Arduino MKR1000 × 1 Hand tools and fabrication machines wifi router Story Hello everyone. First I want to say that this project is for the world's largest Arduino...... Listed under: [Wireless Projects](#)

706. [MKR1000 Christmas IoTree with Cayenne Project Builder](#) Automate your Christmas tree and get notified when motion is detected around the tree! Things used in this project Hardware components Arduino MKR1000 × 2 PIR Motion Sensor (generic) × 1 Jumper wires (generic) × 1 Relay (generic) This is a really easy relay to...... Listed under: [LED Projects](#), [Other Projects](#)

under: [Metering – Instrument Projects](#)

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708. [MKR1000 to ThingSpeak.com](#) A fairly simple project that attaches everyone's favorite environmental monitor, the DHT, to the Arduino MKR1000 then transmits sensor data. Things used in this project Hardware components DHT11 Temperature & Humidity Sensor (4 pins) Arduino MKR1000 Story I had already developed code for the ESP8266…… Listed under: [Sensor – Transducer – Detector Projects](#), [Temperature Measurement Projects](#)

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709. [MKR1000 Unboxing and Testing (7 Steps)](#) The first run and the first troubles with the Arduino MKR 1000. FAQ. Things used in this project Hardware components Arduino MKR1000 × 1 Software apps and online services Arduino IDE Story Finally I've got the board Genuino/Arduino MKR1000. It was well packed and fast shipped……. Listed under: [LED Projects](#)

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710. [Temperature Monitoring on Smartphone](#) This article describes a temperature monitoring system on an Android smartphone. Temperature is sensed by a temperature sensor installed in the circuit and is sent over Bluetooth to the smartphone. An Android application is used in the smartphone to display temperature data. The system provides…… Listed under: [Sensor – Transducer – Detector Projects](#)

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711. [MKR1000 RGB Strip Controller](#) Using the power of a winning idea, an MKR1000, and a TLC5940 to add RGB lighting to my workspace. Things used in this project Hardware components Arduino MKR1000 Texas Instruments TLC5940 12V 30A Power Supply Software apps and online services Microsoft Visual Studio 2015 Arduino…… Listed under: [LED Projects](#)

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712. [Ultimate 6V powering board you will ever need!](#) (AllNewsStories Editorial):- Ahmedabad, Mar 5, 2019 (Issuewire.com) – The board we are talking about is a perfect solution for powering the 6V systems like Arduino and Raspi. The device will be live on Indiegogo soon. Arduino, Raspberry Pi and other development boards have gained much…… Listed under: [Battery Projects](#)

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713. [MKR1000 Connecting to the WiFi (3 steps)](#) How to connect the Arduino MKR 1000 with the WiFi. Things used in this project Hardware components Arduino MKR1000 × 1 Software apps and online services Arduino IDE Story How to connect the MKR 1000 with the WiFi? - It's easier than you think. The…… Listed under: [Wireless Projects](#)

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714. [Build Your Own Digital Weighing Machine](#) This article describes how to build a simple and low-cost digital kitchen weighing machine, which can measure weight of up to five kilograms. This digital weighing machine is easier to design. For a heavy-duty weighing machine like your bathroom scale, just change the load cell…… Listed under: [Metering – Instrument Projects](#)

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715. [MKR1000 Temp and Humidity Sensor](#) Send temperature and humidity data from an Arduino MKR1000 to Microsoft Azure. Things used in this project Hardware components Arduino MKR1000 Arduino MKR1000 × 1 DHT22 Temperature Sensor DHT22 Temperature Sensor × 1 Software apps and online services Microsoft Azure Microsoft Azure Arduino IDE Arduino…… Listed under: [Sensor – Transducer – Detector Projects](#), [Temperature Measurement Projects](#)

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716. [MKR1000 Pushover Status](#) Send status messages of your MKR1000 via Pushover service to your mobile phone, etc. Things used in this project Hardware components Arduino MKR1000 Story An IoT node must be trimmed to reduce current consumption due to battery life. A WiFi-based node as Arduino MKR1000 needs…… Listed under: [Wifi - WLan Projects](#), [Wireless Projects](#)

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717. [Microcontroller Projects: Fridge Temperature and Humidity Indicator](#) We can measure temperature and humidity inside the fridge using a normal temperature-humidity indicator but relative humidity (RH) could be inaccurate in that case. The moment the fridge door is opened, RH will shoot up due to ingress or egress of moisture in the surroundings……. Listed under: [Sensor – Transducer – Detector Projects](#)

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718. [Weather Forecasting on ESP32](#) In any power utility corporation ash dyke management is a huge issue. For fugitive dust control huge sprinklers that spray water all along the dry portion of the dyke are used but maintenance of these sprinklers is a problem as we really don't have any…… Listed under: [Sensor – Transducer – Detector Projects](#)

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719. [Door-Ajar Alert with Countdown Timer](#) Ever accidentally left your room door ajar for a long period of time and found your valuables missing? Here is an intelligent solution for you. The idea is fairly simple as it mainly requires a TM1637 4-digit display and a Digispark USB development board. Digispark…… Listed under: [Memory – Storage Project Ideas](#)

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720. [3D Printed Alarm Clock Looks Just Like Store Bought](#) Clocks are a popular project on Hackaday. They're a great way to showcase a whole range of creative build

721.   [Automatic Railway Gate for Unmanned Railway Crossing](#) The aim of this project is to save lives of people who are crossing unmanned railway crossings; by providing an automatic railway gate solution. There are many accidents occurred and lives are lost while crossing the unmanned railway crossings in India. Materials Used: Wood Thermocol…… Listed under: [Sensor – Transducer – Detector Projects](#)

722.   [Reaction Time Game](#) This reaction time game tests the time taken by two players to react, and declare the fastest one as a winner. To do this I am using external interrupts and pin change interrupts in atmega328p. It gives four chance to each play, time of each…… Listed under: [Game – Entertainment Projects](#)

723.   [Connected Message Lamps using ESP8266 | IoT Projects](#) It is not just another Engraved LED lamp that you see on the market nowadays. This is an advanced version of that lamps. In the era of connected devices, I have made my own connected lamps. This project is inspired by Filimin: A Wi-Fi Enabled Touch Light That…… Listed under: [LED Projects](#)

724.   [Getting started with NodeMCU development board for IoT](#) Since Internet of Things (IoT) projects are now quite popular, I recently bought a NodeMCU board to try IoT application development. The NodeMCU development board is an open source board based on ESP8266EX microcontroller with integrated Wi-Fi transceiver. Uploading programs to NodeMCU from any computer…… Listed under: [Development Board – Kits Projects](#)

725.   [Digital Soil Moisture Meter](#) A digital soil moisture meter is used for indicating the water content of a given soil sample. [caption id="attachment_31551" align="alignright" width="300"] Soil moisture sensor head[/caption] As crop production requires water at different stages and in different amounts, it is important to measure soil moisture from…… Listed under: [Metering – Instrument Projects](#)

726.   [Ultra-Low-Power Sensor Hub Using nRF24L01 Modules](#) Presented here is an ATmega328P microcontroller-based ultra low power sensor hub using nRF24L01+ radio frequency (RF) transceiver modules having transmitter and receiver units. The transmitter sends humidity and temperature values of a place to the receiver kept at a remote location for display on an…… Listed under: [Sensor – Transducer – Detector Projects](#)

727.   [How to Play with Pancake Vibration Motors](#) Nowadays numerous electronic devices make use of vibrotactile feedback to increase user interaction with the help of suitable haptic feedback hardware like the eccentric rotating mass motors, linear resonant actuators, and piezoelectric actuators. The most popular type of eccentric rotating mass (ERM) motor inside of…… Listed under: [Motor Projects](#)

728.   [Short-Range FM Radio Station](#) This article shows you how to build a small radio station at home and share music with others. The station can also be used for making announcements in colleges, industries, hospitals, schools and other places using a condenser mic amplifier circuit. In this project an…… Listed under: [Radio Projects](#)

729.   [Line Frequency Meter Based On Reciprocal Counting](#) Precise measurement of line signal frequency is very important in many applications, especially in the management of power grid systems. Tasks like calibration of governors of engines that run generators in power plants need a resolution up to 0.01Hz. Frequency is also an important parameter…… Listed under: [Metering – Instrument Projects](#)

730.   [Voice-Controlled Home Automation System](#) This is a project for a voice controlled home automation system to control appliances with your voice through an Android app. An Arduino Mega board is used for controlling the relay through which an appliance is switched on/off. You can modify the Android app to…… Listed under: [Home Automation Projects](#)

731.   [LDR Based DC Motor Speed Control](#) A light-dependent resistor (LDR) whose resistance is inversely proportional to the intensity of light is often used as a sensor in electronic projects that involve the use of light. This LDR based DC motor speed control project uses an LDR to control the speed of…… Listed under: [Motor Projects](#)

732.   [IoT-Enabled Air Pollution Meter With Digital Dashboard On Smartphone](#) Presented here is a IoT enabled air pollution meter to monitor air quality on your smartphone using Blynk application and Arduino board. Blynk is an Internet of Things (IoT) platform to control Arduino, Raspberry Pi and the like over the Internet. In this project Blynk…… Listed under: [Metering – Instrument Projects](#)

733. [Controlling A Robotic Car Through MATLAB GUI](#) This project presents the implementation of a MATLAB based graphical user interface (GUI) to control the

This website uses cookies to improve your experience. We'll assume you're ok with this, but you can opt-out if you wish.   ACCEPT   **Check Privacy Policy**

734.   [Microcontroller Projects: Sonar Water-Level Meter](#) Three-fourths of the earth is water, out of which 97 per cent is saline (in oceans, seas and groundwater). The remaining 2.5 per cent to 2.75 per cent is fresh water , out of which 1.75 per cent to two per cent is frozen in…… Listed under: [Metering – Instrument Projects](#)

735.   [Sequential Tilt-Motion Lock](#) Here is a project for locking and unlocking with a tilt sensor by tilting it in a defined sequence. It uses an accelerometer module to detect the tilt motion. If the sequence matches with the predefined motion sequence, the lock opens. You can build this…… Listed under: [Security – Safety Projects](#)

736.   [Analogue Input on Raspberry Pi](#) While you can connect your analogue input/output devices to Arduino very easily, it is not so easy with Raspberry Pi (Raspi). There are no analogue GPIO pins on Raspi; all GPIOs of Raspi are digital. Circuit diagram of an analogue sensor on Raspi However, simple…… Listed under: [Other Projects](#)

737.   [Serial LCD Module](#) In most electronic systems, it is necessary to provide information in the visual form for a convenient user interface. The most commonly used displays in electronic systems are LED, LCD and TFT. Amongst these, an LCD display is the most cost-effective solution as it can…… Listed under: [LCD Projects](#)

738.   [RGB LED Cube with Sound to Light Capabilities](#) The objective of our final project was to build a 5x5x5 RGB LED cube that can display a certain color depending on the frequency of music playing. There are two main components of this project. [gallery columns="2" size="medium" ids="31240,31241"] The first part is the hardware…… Listed under: [LED Projects](#)

739.   [Magnetometer Parking Sensor](#) The objective of our project was to develop a wireless sensor device to be used for detecting motor vehicles, along with their direction of travel. The sensor is to be used in a larger system to monitor parking lot traffic by counting ins and outs…… Listed under: [Sensor – Transducer – Detector Projects](#)

740.   [Balance Beam Controller](#) The purpose of our final project was to create an unstable system that would allow us to investigate classical control design methods by controlling the system using a microcomputer. [gallery columns="2" size="medium" ids="31225,31226"] This was accomplished by creating a teeter-totter that pivoted around a central…… Listed under: [Sensor – Transducer – Detector Projects](#)

741.   ["The Note is Right" Pitch Tuning Game](#) The objective of this project is to provide a multiplayer "pitch tuning" game in which the computer can determine the frequency of players' input notes. [gallery columns="2" size="medium" ids="31217,31218"] The system guides two users through various states in which they are each given the chance…… Listed under: [Game – Entertainment Projects](#)

742.   [Digital Multimeter](#) The purpose of this project was to design a functioning digital meter to measure voltage, current, and resistance to a known accuracy. The project involved the integration of hardware and software to take an input measurement signal from a pair of high and low leads…… Listed under: [Metering – Instrument Projects](#)

743.   [Four Channel Temperature Controller](#) For our final project, we designed a 4-channel temperature controller using PID control. The system was designed to monitor and regulate the temperature of four individual channels by applying 120V to heating elements using on/off switching. [gallery columns="2" size="medium" ids="31204,31205"] This switching was indirectly manipulated…… Listed under: [Sensor – Transducer – Detector Projects](#)

744.   [Anti-Collision (Wall Hugging) Robot](#) Our project consists of a vehicle designed to avoid collisions with objects and walls. The vehicle achieves this through the use of an onboard sensor to determine when such an object was close by. [gallery columns="2" size="medium" ids="31197,31198"] After recognizing an object within a certain…… Listed under: [Robotics – Automation Projects](#)

745.   [Pushbutton → Push Notification](#) How many mundane devices upgrade to IoT because they let you monitor a single data point or a variable? That little nudge over the communication precipice allows you to charge 500% more. Now, if you are as handy as a Hackaday reader, you can throw…… Listed under: [Wifi - WLan Projects](#)

746.   [The Picture Drawing Robot](#) The desired outcome of our final project was to create an autonomous robot that was programmed to move through a series of figures, then stop. Due to time constraints we limited the robot to " drawing " two figures, a five pointed star as well…… Listed under: [Robotics – Automation](#)

747.   [Alarm System](#) The objective of our project was to create an alarm system that could detect an intruder using an IR motion sensor. We used a keypad so the user could enter their password to arm and disarm the system. [gallery columns="2" size="medium" ids="31154,31155"] We also included…... Listed under: [Clock – Timer Projects](#)

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748.   [Home Energy Monitor](#) The purpose of the Home Energy Monitor Final Project is to give people a better idea how much electrical power they consume in a residential system. [gallery columns="2" size="medium" ids="31149,31148"] The method used for this application will utilize a clip on noninvasive current sensor on…... Listed under: [LCD Projects](#)

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749.   [RGB LED Strip Clock](#) For the final project we made an analog style clock with an Arduino microcontroller. To do this we used three major components: an RGB LED Strip, a DeadOn RTC, and a custom user interface. The LED strip is used to set the display around the…... Listed under: [LED Projects](#)

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750.   [ReFlex Reaction Game](#) We decided to construct a game for our final project for Microcomputer Architecture. The game, which we named Reflex [gallery columns="2" size="large" ids="31137,31138"] is a simple player versus player reaction game in which the winner is rewarded with a drink of their choice, poured into…... Listed under: [Game – Entertainment Projects](#)
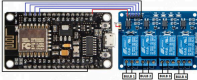
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751.   [RGB LED Grid](#) This project involved creating a red, blue, green (RGB) light emitting diode (LED) matrix that displayed the colors of the rainbow. The colors of the rainbow were chosen to show the full color spectrum that the LEDs are capable of, while still giving distinct variation…... Listed under: [LED Projects](#)

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752.   [Smart Aquarium](#) The goal of our project is to display the status of a previously implemented smart aquarium. The previously implemented system includes an external power supply, Arduino Uno, Ethernet Shield, ULN2803 driver, 4 120V AC relays, and 4 controlled 120V AC receptacles, and a servo motor…... Listed under: [Game – Entertainment Projects](#)

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753.   [Oct Home Automation using ESP8266 & Blynk App – IoT](#) A home automation system is an automating the bulk of electronic and electrical tasks within a home. It uses a combination of hardware and software to enable control and management over appliances and devices within a home. Home automation not only refers to reduce human efforts but also energy…... Listed under: [Home Automation Projects](#)

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754.   [DIY Arduino Motor Driver Shield](#) In this DIY session, we make an Arduino Motor Driver Shield to drive DC motors, stepper motor and Servo Motor. Compatible with Arduino UNO and Arduino Mega, this motor driver shield can operate 4 DC motors or 1 stepper motor and 2 servo motors at a time. Here two L293D…... Listed under: [How To – DIY – Projects](#)

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755.   [Record and Play 3D Printed Robotic Arm using Arduino](#) Record and Play 3D Printed Robotic Arm using Arduino Robotic Arms have proved themselves useful and more productive in many applications where speed, accuracy and safety is required. But to me, what's more than that is these things are cool to look at when they…... Listed under: [Robotics – Automation Projects](#)

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756.   [Controlling Arduino with Raspberry Pi using pyFirmata](#) Controlling Arduino with Raspberry Pi using pyFirmata Although Raspberry Pi and Arduino are two different hardware in terms of their applications and structure, but they both are considered as two competing open source hardware platforms. They both have very strong community and support. Today we will slightly change…... Listed under: [Development Board – Kits Projects](#)

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757.   [LC Meter using Arduino: Measuring Inductance and Frequency](#) All embedded lovers are familiar with multimeter which a great tool to measure voltage, current, resistance etc. A multimeter can measure them easily. But sometimes we need to measure inductance and capacitance which is not possible with a normal multimeter. There are some special multimeters…... Listed under: [Metering – Instrument Projects](#)

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758.   [Analog Speedometer Using Arduino and IR Sensor](#) Measuring the speed/rpm of a Vehicle or a motor has always been a fascinating project to try. In this project, we are going to build a Analog Speedometer using the Arduino. We will use IR Sensor module to measure the speed. There are other ways/sensors for…... Listed under: [Sensor – Transducer – Detector Projects](#)

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759. [Arduino Based Guitar Tuner](#)   Hi guys, during the last few weeks, I've been working on reconnecting with my love for the guitar. Playing the box guitar was how I relax few years back before the saxophone took over. Going back to the guitar, after 3 years of rarely…... Listed under: [Sound – Audio Projects](#)

760. [IoT Based Patient Monitoring System using ESP8266 and Arduino](#) IoT based Patient Monitoring System using ESP8266 and Arduino Health monitoring is the major problem in today's world. Due to lack of proper health monitoring, patient suffer from serious health issues. There are lots of IoT devices now days to monitor the health of patient…… Listed under: [Medical – Health based Projects](#)

761. [Interfacing nRF24L01 with Arduino: Controlling Servo Motor](#) Arduino NRF24L01 Tutorial to Control Servo Motor While Internet of things (IoT), Industry 4.0, Machine to Machine communication etc are getting increasingly popular the need for wireless communication has become incumbent, with more machines/devices to speak with one another on the cloud. Designers use many…… Listed under: [Motor Projects](#)

762. [Smart Phone Controlled Arduino Mood Light with Alarm](#) Smart Phone Controlled Arduino Mood Light with Alarm I recently purchased the Neo Pixel LED strip and was quite impressed by the way it works. The tiny LED's have an inbuilt driver IC which helps us to control each LED individually and can produce a wide spectrum…… Listed under: [Clock – Timer Projects](#), [LED Projects](#), [Phone Projects](#)

763. [DC Motor Control Using MATLAB and Arduino](#) In this tutorial, we will show you how to control DC motor using MATLB and Arduino. If you are new with MATLAB then it is recommend to get started with simple LED blink program with MATLAB. Creating MATLAB Graphical User Interface for controlling DC Motor After finishing…… Listed under: [Motor Projects](#)

764. [Stepper Motor Control using MATLAB and Arduino](#) Stepper motors is a brushless DC motor that rotates in discrete steps, and are the best choice for many precision motion control applications. Also, stepper motors are good for positioning, speed control and applications which require high torque at low speed. In previous tutorials of MATLAB,…… Listed under: [Motor Projects](#)

765. [ARDUINO NANO ANDROID ROBOT PROJECT QIK2S9V1 XBEE BLUETOOTH](#) Android robot project built on the Arduino Nano sumo the Sumo robot motor control Qik2s9v1 dual serial motor controller module, Xbee for communication via your Android phone with Bluetooth module is being used. The… Electronics Projects, Arduino Nano Android Robot Project Qik2s9v1 Xbee Bluetooth"arduino projects, avr project,…… Listed under: [Robotics – Automation Projects](#)

766. [GUITAR TUNING PROJECT WITH ARDUINO UNO](#) Arduino Uno kit on the Board at the entrance of the TL082 opamp used Guitar Tuning circuit audio audio input and frequency to detect the "Arduino-Frequency-Detection" software used. According to the LEDs light at… Electronics Projects, Guitar Tuning Project with Arduino Uno "arduino projects, avr project, microcontroller projects, "…… Listed under: [Sound – Audio Projects](#)

767. [ARDUINO UNO ROBOTIC ARM PROJECT](#) The Robot arm is controlled with the computer 6 servo motor used robotic arm system, built on the Arduino Uno is not more complex, additional links to make the robot arm mechanics portion of… Electronics Projects, Arduino Uno Robotic Arm Project "arduino projects, avr project, microcontroller projects, " The…… Listed under: [Robotics – Automation Projects](#)

768. [ENC28J60 ETHERNET MODULE FOR ARDUINO KIT](#) Arduino Kits can be merged with the Arduino Ethernet module is based on the materials used in the design of the PCB DIP ENC28j60 SMD No 3 .3V regulator is used for the material,… Electronics Projects, ENC28j60 Ethernet Module For Arduino Kit "analog circuits projects, arduino projects, microcontroller…… Listed under: [Internet – Ethernet – LAN Projects](#)

769. [Making of the Holiday Lantern](#) Making a Holiday Lantern for which I can change its 'outfits' to different theme depending on the holiday seasons. Things used in this project Hardware components Arduino MKR1000 × 1 Adafruit NeoPixel Ring: WS2812 5050 RGB LED × 2 Power Bank × 1 Software apps…… Listed under: [LED Projects](#)

770. [I'm Fine](#) The "I'm Fine" project is about monitoring the well being of especially lonely elderly people, who may not have daily contact to the family. Things used in this project Hardware components Arduino MKR1000 × 1 Arcade style button (60 mm diameter) with builtin LED light……. Listed under: [Sensor – Transducer – Detector Project Ideas](#)

771. [ARDUINO UNO WITH INTERESTING CLOCK PROJECT](#) I've shared this with different time interesting projects carried out with the Arduino Uno this time, I think the most interesting thing isn't debatable kullanışlımı project but the idea as a different kind of… Electronics Projects, Arduino Uno With Interesting Clock Project "arduino projects, avr project, microcontroller projects, "…… Listed under: [Clock – Timer Projects](#)

772. [SPECTRUM ANALYZER CIRCUIT ARDUINO UNO](#) the Arduino Uno module held with MAX7219 8×8 LED matrix display module graphic equalizer spectrum analyzer and the filter driver in the project 2 integration of MSGEQ7. In addition, with Arduino MAX7219 for code   Electronics Projects, Spectrum Analyzer Circuit Arduino Uno "arduino projects, microcontroller projects, " the Arduino Uno

773. [Domotic Greenhouse](#) Electronic greenhouse controlled real-time, because the environmental conditions change continuously, so we need an efficient monitoring. Things used in this project Hardware components Arduino MKR1000 × 1 Arduino UNO & Genuino UNO × 1 DHT22 Temperature Sensor × 1 Arduino Wifi Shield 101 × 1...... Listed under: [Irrigation Projects](#), [Wireless Projects](#)

774. [USB CNC PROJECT ARDUINO UNO](#) Arduino uno USB module is controlled via the circuit built on a CNC, which supports the SVG image format in post format, used CNC motor driver L298N motor driver Arduino Uno for the project... Electronics Projects,USB CNC Project Arduino Uno "arduino projects, microcontroller projects, " Arduino uno USB module...... Listed under: [CNC Machines Projects](#)

775. [Say Thanks to all Courteous Drivers](#) Ever want to say thanks to the nice person who just let you in line? I have thought a lot about that, and here is my solution. Things used in this project Hardware components Arduino MKR1000 × 1 SparkFun Bluetooth Modem - BlueSMiRF Silver ×...... Listed under: [LED Projects](#), [Phone Projects](#)

776. [HANDMADE MEMBRANE KEYPAD, AND THE ARDUINO APPLICATION](#) The author has done a beautiful job with handmade membrane is quite an original view is a little tricky, but it works in the prototype experiments, a thin copper foil pieces of the paper... Electronics Projects,Handmade membrane keypad, and the Arduino application "arduino projects, microcontroller projects, " The...... Listed under: [Development Board – Kits Projects](#)

777. [CarSmart](#) Smart cloud-based vehicle OBD-II diagnostics logging and analysis using Azure IoTHub, Stream Analytics, and Machine Learning. Things used in this project Hardware components Arduino MKR1000 × 1 SparkFun OBD-II-UART This board requires only three connections. I soldered pins and use wire wrap to connect to...... Listed under: [Car Projects](#)

778. [Thundercatch IoT Network](#) Monitor lightning activity and get alerted on dangerous situations. Things used in this project Hardware components Arduino MKR1000 × 1 MikroElektronika Thunder click × 1 Female/Female Jumper Wires × 1 Software apps and online services Microsoft Azure Microsoft Visual Studio 2015 Arduino IDE Story Introduction...... Listed under: [Projects](#), [Sensor – Transducer – Detector Projects](#)

779. [PIANO SOUND CONTROLLED RGB LED AMBILIGHT ARDUINO MEGA](#) As far as I know the system first began to be used in the image on the computer monitor Ambilight the most intense color, whatever color changes the LEDs accordingly when I find a... Electronics Projects, Piano sound controlled RGB LED ambilight Arduino Mega "arduino projects, microcontroller projects, "...... Listed under: [Sound – Audio Projects](#)

780. [The Ugliest Sweater](#) In the maker world, only boredom is truly ugly. Prevent boredom with horrible, smart flashy lights!!! Things used in this project Hardware components Arduino MKR1000 × 1 LED string lights (battery-powered) × 1 General Purpose Transistor NPN I used the PN2222A (bought from Adafruit). ×...... Listed under: [How To – DIY – Projects](#)

781. [DRAWING ROBOT MATLAB ARDUINO UNO PROJECT](#) Drawing robot Arduino Uno module is built on a parts kit that was used for the mechanical part of servo motor 3 except that the toy is being used. Generate image data of the... Electronics Projects, Drawing Robot Matlab Arduino Uno Project "arduino projects, microcontroller projects, " Drawing robot Arduino...... Listed under: [Robotics – Automation Projects](#)

782. [SPECTRUM ANALYZER CIRCUIT ARDUINO RGB LED STRIP](#) the spectrum analyzer circuit a project of Arduino Duemilanove Module 7-band graphic equalizer on board sound on the ground floor MSGEQ7 used to integrate MSGEQ7 is a very talented 8-pin ICS in the frequency...Electronics Projects, Spectrum Analyzer Circuit Arduino RGB Led Strip "arduino projects, microcontroller projects, " the spectrum...... Listed under: [LED Projects](#)

783. [Make SMART Your Washing Machine](#) If also you, like me, put your vest on the washing machine and wait the best moment for wash the clothes... make SMART your Washing Machine. Things used in this project Hardware components Arduino MKR1000 × 1 Tilt Sensor Switch × 1 Software apps and...... Listed under: [How To – DIY – Projects](#), [Projects](#)

784. [Store Your Sensitive Data Safely When Sharing a Sketch](#) If there is sensitive data that you want to keep private when sharing a sketch, add a secret tab and store your private info there! Things used in this project Software apps and online services Arduino Web Editor Arduino IDE Story Often in your sketch,...... Listed under: [Security – Safety Projects](#)

785. [ARDUINO UNO FM AM TRANSMITTER CIRCUIT SI4713](#) The most important part is the construction of a functional sample of a Arduino Uno software-defined one transmitter. After agreement with the supervisor and current options, she was elected concept with SI4713 digital circuit... Electronics Projects, Arduino Uno FM AM Transmitter Circuit SI4713 "arduino projects, microcontroller projects, " The...... Listed under: [Radio Projects](#)

786. [The Sensometer: 22+ Sensors](#) This is the "Sensometer", a great example of IoT! Get all sensors working at once! Things used in this project Hardware components Arduino MKR1000 × 1 Arduino Mega 2560 & Genuino Mega 2560 × 1 Real Time Clock (RTC) × 1 ProtoCentral Pulse Oximeter &...... Listed under:

787. [LED POV CLOCK ARDUINO PRO MINI](#) The Arduino led pov clock circuit has been an interesting project, and the author has made use of the arduino feeding system with the popular wireless energy transmission method, which is an additional circuit…Electronics Projects, Led Pov Clock Arduino Pro Mini "arduino projects, led projects, microcontroller projects, "…… Listed under: [Clock – Timer Projects](#)

788. [Project "Gallon" – Smart Drinking Water Monitoring Platform](#) This project is a platform for drinking water monitoring and analytics, consists of IoT device, cloud, and mobile and web app. Things used in this project Hardware components Arduino MKR1000 × 1 PCF8574 × 1 AC-DC Module 5V 500mA × 1 10 Segment LED Bar…… Listed under: [Metering – Instrument Projects](#), [Projects](#), [Wifi - WLan Projects](#)

789. [Gestured Controlled Smart Home](#) Not only this project has all the Smart Home features but it also includes MYO gesture control, allowing control of lights with your arm. Things used in this project Hardware components Myo Gesture Control Armband Armband used to detect arm gestures and control different hardwares…… Listed under: [Home Automation Projects](#), [Projects](#)

790. [Monitor and control your irrigation system with a mobile app](#) Create your Blynk mobile app to monitor your garden and activate the irrigation. Things used in this project Hardware components Arduino MKR1000 × 1 Seeed Grove - Relay × 1 Arduino Rural Hack Kit × 1 Software apps and online services Blynk Story In this…… Listed under: [Irrigation Projects](#), [Projects](#)

791. [LoRa gateway and node boards run on Raspberry Pi power](#) Pi Supply is Kickstartering Iot LoRa Gateway and IoT LoRa Node pHAT add-ons for the Raspberry Pi, as well as a LoRa Node that works with the Micro:bit. An Arduino node is also in the works.Pi Supply, which has produced a variety of Raspberry Pi…… Listed under: [Wireless Projects](#)

792. [BALANCE ROBOT ARDUINO UNO](#) Previously shared " Analog Balance Robot "project using Arduino Uno . Motor drive SparkFun Ardumoto this module is based on the L298 motor drive integration SMD materials are used because the size of the…Electronics Projects, Balance Robot Arduino Uno "arduino projects, " Previously shared " Analog Balance Robot "project using Arduino…… Listed under: [Robotics – Automation Projects](#)

793. [ARDUINO EXTERNAL CIRCUIT CONNECTION CHARTS](#) Arduino transistors, LEDs, motors, MOSFETs, various electronic components, circuit connection diagrams that will be of great use for Arduino projects, Arduino circuits or those who are new to Arduino programming … Circuit diagrams are… Electronics Projects, Arduino External Circuit Connection Charts "arduino projects, " Arduino transistors, LEDs, motors, MOSFETs,…… Listed under: [Motor Projects](#)

794. [ATMEL ARDUINO COLORED CONNECTION CHART](#) Projects or schematics, drawings that will work when preparing pcb Atmel AVR Microprocessors Information Tags for "Share" drawings directly on Atmel microcontrollers. Colored linking expansions are more comprehensible for those dealing with Atmel Series… Electronics Projects, Atmel Arduino Colored Connection Chart "arduino projects, " Projects or schematics, drawings that…… Listed under: [Other Projects](#)

795. [esp8266/Arduino NTC (Negative Temperature Coefficient) library](#) A thermistor is a type of negative coefficient resistor whose resistance is dependent on temperature, more so than in standard resistors. The resistance of a NTC Negative Temperature Coefficient thermistor (https://en.wikipedia.org/wiki/Thermistor) decreases as temperature rises. The Steinhart-Hart Thermistor Equation or the Beta Model Equation can be used to correlate the thermistor…… Listed under: [Temperature Measurement Projects](#)

796. [Smart Garage](#) Change the way you operate your garage! Things used in this project Hardware components Arduino MKR1000 × 1 GY-521 MPU-6050 3 Axis Gyroscope + Accelerometer Module For Arduino × 1 Ultrasonic Sensor - HC-SR04 (Generic) × 1 SSD1306 OLED I2C Display × 1 Relay (generic)…… Listed under: [Home Automation Projects](#)

797. [PuzzleBox](#) Protect your valuables with a puzzle! Things used in this project Hardware components Arduino MKR IoT Bundle × 1 Software apps and online services Blynk Story Keeping your valuable items away from prying eyes can be hard sometimes, unless you put it in a big…… Listed under: [Security – Safety Projects](#)

798. [Love You Pillow](#) Open source is love, and so are hugs!   Things used in this project Hardware components Arduino MKR IoT Bundle × 1 Software apps and online services Telegram Story We all know that being without that special person in your life can be difficult, but…… Listed under: [Other Projects](#)

799. [Home Automation System for a Camp with Cellular Internet](#) Wouldn't it be nice if you could start warming up the camp before you leave the house? How about using Alexa to do it for you! Things used in this project Hardware components Amazon Alexa Echo Dot × 1 Arduino

800. [Wi-Fi Power Toggler](#) Restores your Wi-Fi connection for you, so you don't have to, and keeps a track of how often this is done. Things used in this project Hardware components Arduino MKR1000 × 1 DFRobot DF Robot Lithium Polymer Battery (1000mAh, 3.7V) × 1 Jumper wires (generic)…... Listed under: [Wifi - WLan Projects](#)

801. [Baby-Pram Monitoring System](#) Real time monitoring variables like temperature, X-Y-Z acceleration, sound and light intensity for baby-pram. Things used in this project Hardware components MMA7260 × 1 LM92 × 1 Breadboard (generic) × 1 Electret microphone × 1 Arduino MKR1000 × 1 max4236 × 1 Photocell × 1…... Listed under: [Sensor – Transducer – Detector Projects](#), [Temperature Measurement Projects](#)

802. [A DIY Smart Insole to Check Your Pressure Distribution](#) The smart insole collects foot pressure data in real-time. Through Thinger.io the information is fed into a system that visualizes the data. Things used in this project Hardware components Arduino MKR1000 × 1 Force Sensitive Resistor I've used Interlink model 402 × 3 OpenBuilds Wire…... Listed under: [Projects](#), [Sensor – Transducer – Detector Projects](#)

803. [Smart IOT Propane Monitoring Pedestal](#) Smart IOT Propane Pedestal capable of tracking propane level as well as detecting any propane leaks. Integration with Amazon Alexa. Things used in this project Hardware components Arduino MKR1000 × 1 SparkFun Load Sensor 50kg × 4 SparkFun Logic Level Converter - Bi-Directional × 1…... Listed under: [Projects](#), [Sensor – Transducer – Detector Projects](#)

804. [Crypto Miner](#) Monitor your crypto mining hardware temperatures and hash rates with the ability to restart the rig remotely as well as Alexa integration. Things used in this project Hardware components Arduino MKR1000 × 1 Raspberry Pi 3 Model B × 1 Temperature probe (ds18b20) × 5…... Listed under: [Projects](#), [Temperature Measurement Projects](#)

805. [Wi-Fi RC Car – Qi Enabled](#) This is a project that will show you how to create a Wi-Fi controlled RC Car that will recharge wirelessly while it is parked. Things used in this project Hardware components IDT Qi 5W Transmitter Prototype Kit × 1 IDT Qi 5W Receiver Prototype Kit…... Listed under: [Projects](#), [Wireless Projects](#)

806. [DIY Arduino Relay Driver Shield](#) In this DIY project we make a 3-Channel Arduino Relay Shield Circuit for relay based applications. We designed an isolated PCB for 3 relays. By using this Arduino Relay Shield, we can operate 3 AC appliances at a time. We have put a two pin screw terminal blocks (Neutral, NO)…... Listed under: [Other Projects](#)

807. [IoT Based Electricity Energy Meter using ESP12 and Arduino](#) We all know about Electricity energy meters which are installed in everyone's house or offices to measure the electricity consumption. At last of every month, many of us get worried about the high electricity bill and we have to look at the energy meter once…... Listed under: [Wifi - WLan Projects](#)

808. [Smart Thermostat](#) Connect your home heater to Internet and chat with it via Telegram! Things used in this project Hardware components Arduino MKR1000 × 1 DHT22 Temperature Sensor × 1 SparkFun Pushbutton switch 12mm × 3 Resistor 10k ohm × 4 LCD screen × 1 Software apps…... Listed under: [Projects](#), [Temperature Measurement Projects](#)

809. [What is Brushless DC Motor (BLDC) and How to Control it with Arduino](#) Building stuff and getting them work, the way we want, has always been sheer fun. While that being agreed, building stuff that could fly would defiantly pump a bit more anxiety among the hobbyists and hardware tinkerers. Yes! I am talking about Gliders, Helicopters, Planes…... Listed under: [Motor Projects](#)

810. [Weather Station for Drones](#) The project consists of a kit for drones that includes an electronic device that functions as a meteorological station. Things used in this project Hardware components Arduino MKR1000 or Arduino/Genuino Zero + Arduino wifi shield 101 × 1 DHT22 Temperature Sensor × 1 Jumper wires…... Listed under: [Drone](#), [GPS Based Projects](#), [Projects](#)

811. [What is Rotary Encoder and How to Use It with Arduino](#) A Rotary encoder is an input device which helps the user to interact with a system. It looks more like a Radio potentiometer but it outputs a train of pulses which makes its application unique. When the knob of the Encoder is rotated it rotates…... Listed under: [LCD Projects](#)

812. [Visibility sensor for divers](#) Planning a scuba dive will be much easier with the data of visibility sensors on the divespot. Things used in this project Hardware components LED (generic) Make sure the LED is bright enough × 1 Adafruit TSL2591 × 1 Adafruit Waterproof DS18B20 Digital temperature sensor…... Listed under: [Projects](#), [Sensor – Transducer – Detector Projects](#)

813. [Reed Switch Interfacing with Arduino](#) Reed switch is used in many of the real-life applications such as magnetic door switch, laptops, smartphones etc. In this article, we learn about Reed Switch and guide you to Interface a Reed Switch with Arduino. Reed Switch Reed switch is basically an electrical switch which is…...

814. [Viseesaw](#) Viseesaw uses the figure of a seesaw, to show metaphorically the inequality of two physical, conceptual or social realities. Things used in this project Hardware components Arduino MKR1000 × 1 Breadboard (generic) × 1 Adafruit Motor/Stepper/Servo Shield for Arduino v2 Kit - v2.3 × 1...... Listed under: [Motor Projects](#), [Projects](#)

815. [RFID Based Attendance System – Learn to Build Yourself](#) An RFID based Attendance System is a very interesting project which can be used in different places say in Schools to register the attendance of students and teachers, Private organizations to tabulate monthly working hours of employees and automatically calculate salary based on the number...... Listed under: [LCD Projects](#)

816. [Program MKR Over-the-Air + Goodies: Voice Control, etc.](#) Secure OTA via Azure. Control via voice capable UWP app. Includes sample: room thermostat controlled via phone. Things used in this project Hardware components Arduino MKR1000 This is needed for every OTA projects. The components below are needed only for the use case / sample:...... Listed under: [Internet – Ethernet – LAN Projects](#), [Projects](#)

817. [Smart LCD Brightness Control using Arduino and LDR](#) Smart LCD with Automatic Brightness Adjusting Using Arduino and LDR Sensor Here is a simple Arduino project that focuses on adjusting the brightness of an LCD screen whenever there isn't sufficient light in a room. The Arduino reads the surrounding light intensity using an LDR sensor. ...... Listed under: [LCD Projects](#)

818. [Arduino Real Time Clock using DS1307 RTC Module](#) In this article, we are going to build an Arduino Real Time Clock using DS1307 RTC Module and 16×2 LCD module for display. First of all, let's see how to interface RTC Module to Arduino. There are different kinds of RTC modules available in the market....... Listed under: [Clock – Timer Projects](#)

819. [Door Sensor](#) Monitor if the door or the valve gas is open... or if someone opened the cookie jar! Things used in this project Hardware components Arduino MKR1000 × 1 Li-Ion Battery 1000mAh optional × 1 OpenBuilds Micro Limit Switch × 1 Software apps and online services...... Listed under: [Projects](#), [Sensor – Transducer – Detector Projects](#)

820. [DIY Arduino Weather Station using Nokia Display](#) Learn to Build Arduino Weather Station using DHT11, Soil Sensor, and Nokia Display In this project tutorial, we are going to make an Arduino weather station using 2 sensors; FC-28 soil moisture sensor to measure the moisture and the DHT22 sensor to measure the temperature, humidity...... Listed under: [Sensor – Transducer – Detector Projects](#)

821. [Adaptable Sensor and Notification System](#) A easy to use adaptable sensor and notification system that is designed to be used as a temporary change of state notifier. Things used in this project Hardware components Arduino MKR1000 × 1 PIR Motion Sensor (generic) × 1 SW-420 Motion Sensor Module Vibration Switch...... Listed under: [Arduino Programmer Projects](#), [Internet – Ethernet – LAN Projects](#), [Projects](#)

822. [Nokia 5110 LCD and Arduino – Ultimate Tutorial and Guide](#) Interfacing Nokia 5110 LCD Display To Arduino In this article, we are publishing a project tutorial which explains different aspects of interfacing a Graphical LCD (GLCD) Nokia 5110 with Arduino. Nokia 5110 is a 48 x 84 graphic LCD that has an internal controller...... Listed under: [Phone Projects](#)

823. [DC Motor Speed Control using GY 521 Gyro/Accelerometer and Arduino](#) In this article, we are going to control two motors by using the GY-521 accelerometer module. The speed of the motor will increase or decrease upon moving the GY-521 module up or down. On moving the Gy-521 towards the downside, the speed of the first...... Listed under: [Motor Projects](#)

824. [Codename RGB](#) Remotely control your RGB LED strip from your pc. Things used in this project Hardware components Arduino MKR1000 × 1 Power MOSFET N-Channel Might be something similar. × 3 RGB Led Strip Make sure its 12v dc (if Its not 12v you will have to...... Listed under: [LED Projects](#), [Projects](#)

825. [Automatic Irrigation System using Arduino](#) In this project, we are going to build an automatic irrigation system using Arduino which senses the moisture of the soil and opens or closes the valve according to the moisture value. The moisture value and the valve status is shown on the Nokia 5110...... Listed under: [LCD Projects](#)

826. [BBC Micro Online](#) BBC Micro connects to WiFi, accesses games over the Internet. Things used in this project Hardware components Arduino MKR1000 × 1 BBC

827.   [Arduino Solar Tracker Using LDR Sensor & Servo Motor](#) Arduino Solar Tracker Solar energy is one of the fastest growing industries in the world; today more than 65 GW energy is produced by solar power. Since solar energy is renewable, it is a good power source, especially for developing countries. In this project, I...... Listed under: [Motor Projects](#)

828.   [Plant Monitoring System](#) Real time plant monitoring system to view temperature, light exposure and moisture. Things used in this project Hardware components Arduino MKR1000 × 1 Breadboard (generic) × 1 Temperature Sensor × 1 Photo resistor × 1 Moisture sensor × 1 Resistor 10k ohm × 1 Software...... Listed under: [Projects](#), [Sensor – Transducer – Detector Projects](#), [Temperature Measurement Projects](#)

829.   [Rain Sensing Wiper using Arduino and Servo Motor](#) Automatic Rain Sensing Wiper Using Arduino This project is designed to build a car wiper that automatically detects the rainfall intensity and regulates the frequency of wiper operation. It is built, using Arduino UNO board. A rain sensing module is used for measuring the intensity...... Listed under: [Motor Projects](#)

830.   [Ultrasonic Blind Walking Stick Using Arduino](#) Ultrasonic Blind Walking Stick According to the WHO, about 30 million people are estimated to be permanently blind worldwide. These people are totally dependent on others. They even cannot walk on their own. We have created designed and built an "Ultrasonic Blind Walking Stick" device...... Listed under: [Sensor – Transducer – Detector Projects](#)

831.   [Automatic Railway Gate Control Using Arduino & IR Sensor](#) About a million people have died over the past 5 years in unmanned railway crossings all over the world. At least 1/3rd of the railway crossings are unmanned due to their remote placement and less traffic. The Automatic Railway Gate Control System using IR Sensor...... Listed under: [Sensor – Transducer – Detector Projects](#)

832.   [Amazon Dash Replenishment Pens](#) A pen holder that determines when there are two or less pens and triggers an Amazon pen set replacement. Things used in this project Hardware components Arduino MKR1000 × 1 Crayola Air Dry Clay × 1 OpenBuilds Micro Limit Switch × 5 Software apps and...... Listed under: [Internet – Ethernet – LAN Projects](#), [Projects](#), [Tutorials](#), [Wifi - WLan Projects](#)
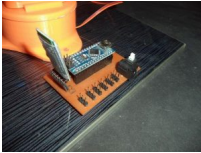
833.   [Interfacing Stepper Motor to Arduino](#) In this article, we are publishing a project which explains different aspects of interfacing a Stepper Motor with Arduino. Stepper motor is a specially designed DC motor which comes with advantages of both a servo motor and a normal dc motor. Compared to a normal...... Listed under: [Motor Projects](#)

834.   [LinkIt™ Smart 7688 Smart Room](#) This Project will demonstrate you to control & monitor your room through my custom designed responsive web app. Things used in this project Hardware components MediaTek Labs LinkIt Smart 7688 Duo × 1 DHT22 Temperature Sensor × 1 Resistor 10k ohm × 1 Resistor 221...... Listed under: [Home Automation Projects](#), [Projects](#), [Sensor – Transducer – Detector Projects](#)

835.   [Simple Robotic Arm Project Using Arduino](#) Nowadays, manual labor is being reduced at big scale industries and factories to increase efficiency and gain profit by installing robots that can do repetitive works. A onetime installation of such a device may cost a huge amount, but in the long run, will turn...... Listed under: [Robotics – Automation Project Ideas](#)

836.   [Remote LED Mood Setter](#) Set LED RGB light Scenes remotely Things used in this project Hardware components Arduino MKR1000 × 1 Breadboard (generic) × 1 RGB Diffused Common Cathode × 1 Story Using MKR1000 to control an RGB LED device. In our shortened example we will use a single...... Listed under: [LED Projects](#), [Projects](#)

837.   [Arduino Gear Motor Interface Using IC L293D](#) In this article, we are publishing a project which explains different aspects of Arduino-Gear motor interface. Gear motor is a specially designed DC motor whose gear assembly helps in increasing the torque and reducing the speed. Compared to a normal DC motor, maximum rpm a...... Listed under: [Motor Projects](#)

838.   [Hot Cocoa 3000](#) Oh the weather outside is frightful, but hot cocoa is so delightful, so let's order some hot cocoa on the go! An Arduino MKR1000 project. Things used in this project Hardware components Arduino MKR1000 × 1 Water Pump NOTE! THIS AND MANY OF THE OTHER...... Listed under: [Other Projects](#), [Projects](#)

839. [Water Level Indicator Using Arduino & Ultrasonic Sensor](#) Water Level Indicator Using Arduino Wireless Water Level Indicator Using Ultrasonic sensor & Arduino is an amazing and very useful project. The objective of this project is to notify the user the amount of water that is present in the overhead water tank. This

840.   [Limb Shaker](#) A stepper motor shakes a limb to frighten away birds and squirrels. It is under the control of the MKR1000. Things used in this project Hardware components DC motor (generic) × 1 Arduino MKR1000 × 1 Story The project uses a stepper motor to pull…… Listed under: [Motor Projects](#), [Projects](#)

841.   [DC Motor Speed Control Using Arduino & PWM](#) Speed control of DC motor with PC Interface is an easy DIY project. In this project DC motor's speed is controlled by sending the command through PC. Arduino is directly connected to PC through the USB cable and command is given to Arduino on serial…… Listed under: [Motor Projects](#)

842.   [PlantAnalyzer](#) A device which collects data (environmental, soil and photosynthesis values) of plant(s) and then stores/analyze using a MKR1000 and Azure. Things used in this project Hardware components Arduino MKR1000 × 1 ADAFRUIT SD CARD READER × 1 ARDUCAM 5MP OV5642 × 1 SparkFun Weather Shield…… Listed under: [Projects](#), [Wifi - WLan Projects](#)

843.   [Project: Car Speed Detector Using Arduino](#) Car speed Detector Project In this project I am going to show you how to measure the speed of running car (or man) from outside. Police department uses this type of system to prevent over speed of vehicles. Our project is a little different from…… Listed under: [LCD Projects](#)

844.   [Getting weather data](#) With this tutorial, you will learn how to get the weather data from a web service to your Arduino. Things used in this project Hardware components Arduino MKR1000 × 1 Story In this tutorial we would make use of the WiFiConnection of our mkr1000. We…… Listed under: [Metering – Instrument Projects](#), [Projects](#), [Sensor – Transducer – Detector Projects](#), [Tutorials](#)
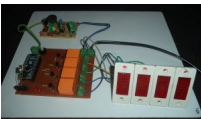
845.   [Project: Gesture Controlled Mouse (Air Mouse) Using Arduino & Accelerometer](#) AIR Mouse is also called gesture-controlled mouse and it works based on hand gesture. In this project an accelerometer is used for measuring the tilt of hand in X and Y direction and moves the cursor according the tilt. In the project two types of…… Listed under: [Battery Projects](#)

846.   [Mind Control Drone](#) Learn how to lift-off a drone with your mind and a hacked controller using a MindWave sensor, Arduino MKR1000 and Processing. Things used in this project Hardware components Arduino MKR1000 × 1 Micro Racing Drone × 1 Capacitor 100 μF × 4 Resistor 221 ohm…… Listed under: [Drone](#), [Projects](#)

847.   [DIY: Measuring Wheel/Surveyor's Wheel Using Arduino & Rotary Encoder](#) DIY: Measuring Wheel/Surveyor's Wheel Using Arduino & Rotary Encoder A surveyor's wheel may also be known by other names like: clickwheel, hodometer, waywiser, trundle wheel, measuring wheel or a perambulator. All these devices serve a single purpose, which is, measuring distance. The origin of surveyor's…… Listed under: [LCD Projects](#)

848.   [Project: Auto Intensity Control Of Street Light Using Arduino](#) Auto Intensity Control Of Street Light Using Arduino In this project, I am going to show you how to control the intensity of LED lights according to the time and the light intensity of outer atmosphere. This is an amazing and very useful project because…… Listed under: [LED Projects](#)

849.   [Control the Position of a Continuous Rotation Servo via WiFi](#) Position control using wifi from a smartphone sounds too good to be true? Do it with MKR1000. Things used in this project Hardware components Arduino MKR1000 × 1 Hand tools and fabrication machines 3D Printer (generic) Story Many position control use steppers because they are…… Listed under: [Projects](#), [Wifi - WLan Projects](#)

850.   [Project: Home Automation Using IR Remote Control](#) Arduino-Remote Control Home Automation In this project, we are going to show you how to control home appliances using a TV Remote. This same principle can be applicable in offices and industries as well. The project deals with the automation of four home appliances, like…… Listed under: [Wireless Projects](#)

851.   [Smartphone Controlled Atomic Weather Station](#) This project combines Atomic Time keeping with local weather station, and additional cool projects using Arduino and Raspberry Pi. Things used in this project Hardware components Arduino UNO & Genuino UNO × 1 Raspberry Pi 2 Model B × 1 Adafruit Ultimate GPS Breakout ×…… Listed under: [GPS Based Projects](#), [Projects](#)

852.   [Create Mobile Apps for Android and iOS Connecting to the MKR](#) This simple project shows how to make an app that controls an Arduino MKR1000 board with Evothings Studio by communicating over the TCP. Things used in this project Hardware components Arduino MKR1000

853.   [Arduino Mega Tutorial – Pinout & Schematics](#) First of all, Why Arduino Mega? When cheaper boards are available, why go with Arduino Mega? The main reason behind this is the additional features that are inbuilt with this board. First feature is the large I/O system design with inbuilt 16 analog transducers and...... Listed under: [Pinouts](#)

854.   [DasFilisera Green House](#) Be kind to your plants! Learn about the green house environment using MKR1000 and sensors. Control soil humidity and air conditions! Things used in this project Hardware components DHT22 Temperature Sensor × 1 DS18B20 × 1 Soil temperature and humidity sensor FS200-SHT25 × 1 4-Channel...... Listed under: [Other Projects](#), [Projects](#), [Sensor – Transducer – Detector Projects](#), [Temperature Measurement Projects](#)

855.   [One Button to Rule Them All](#) Learn how to connect a simple web app written in JavaScript to Arduino Cloud. Things used in this project Hardware components Arduino MKR1000 × 1 SparkFun big dome red button × 1 Software apps and online services Arduino Web Editor Arduino Cloud Story Following this...... Listed under: [Arduino Programmer Projects](#), [Projects](#), [Tutorials](#)

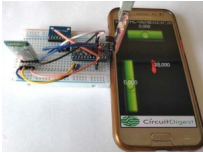856.   [Arduino Alcohol Detector Circuit Board](#) In this project, I am going to Interface an Alcohol Sensor with Arduino. Here I have designed an Arduino Shield PCB using EASYEDA online PCB simulator and designer. Arduino Alcohol Detector will detect the alcohol level in breath and by using some calculations in code...... Listed under: [Sensor – Transducer – Detector Projects](#)

857.   [Arduino Temperature Sensor](#) I previously worked on an enclosure for the Computer Club server rack, and I thought it would be a good idea to put together a standalone temperature sensor system. Preferably it would interface over the internet so that IRC bots and other programs could talk...... Listed under: [Temperature Measurement Projects](#)

858.   [DIY Arduino Inclinometer using MPU6050](#) The MPU6050 is an IC 3-axis accelerometer and a 3-axis gyroscope combined into one unit. It also houses a temperature sensor and a DCM to perform a complex task. The MPU6050 is commonly used in building Drone and other remote robots like a self-balancing robot....... Listed under: [Bluetooth Projects](#)

859.   [Chicken Coop Automation](#) Automating a chicken coop with sensors and actors, using an Arduino MKR1000 and the Blynk internet dashboard. Things used in this project Hardware components Arduino MKR1000 × 1 CHIHAI DC Motor - 12V 200rpm Encoder with Mounting Bracket × 1 Geekcreit L298N Dual H Bridge...... Listed under: [Home Automation Projects](#), [Projects](#)

860.   [Interfacing Graphical LCD (ST7920) with Arduino](#) There are many types of LCDs used in Electronic Projects. We have already used 16X2 LCD in many of our projects and also used TFT LCD with Arduino. You can find our entire 16X2 LCD related project by following this link, including interfacing with 8051, AVR, Arduino and many...... Listed under: [LCD Projects](#)

861.   [Good Sleep – Your Sleep Assistant](#) Get the best night's sleep by using Alexa and Arduino to monitor the conditions in your bedroom, make suggestions and help you sleep better. Things used in this project Hardware components Arduino MKR1000 × 1 Amazon Alexa Amazon Echo × 1 SparkFun MEMS Microphone Breakout...... Listed under: [Sensor – Transducer – Detector Projects](#), [Wifi - WLan Projects](#)

862.   [TVOC and CO2 Measurement using Arduino and CCS811 Air Quality Sensor](#) Sadly, in the name of progress, we have polluted the air, water, soil and the food we eat". So monitoring the air quality is very crucial now days because of pollution. For designing an air quality monitoring system we need durable and reliable air quality...... Listed under: [Sensor – Transducer – Detector Projects](#)

863.   [Interfacing Arduino with MATLAB – Blinking LED](#) In this project, we are going to learn, How to set up hardware support for Arduino in MATLAB software. How to control an Arduino using MATLAB code. We normally use Arduino IDE to write and upload codes to Arduino. The advantage of MATLAB is, it...... Listed under: [LED Projects](#)

864.   [Controlling Multiple Servo Motors with Arduino](#) Using one or two Servo with Arduino is Easy but what if we want to use more than one Servo Motors? Here, we are going to show you that how to control Multiple Servo Motors with Arduino. Connecting multiple Servo Motors with Arduino seems to...... Listed under: [Motor Projects](#)

865.   [Smiling Snowball](#) A web-controlled smiling snowball based on the Arduino MKR1000 controlled via WiFi using MQTT, Shitr.io and Node-red. Things used in this project Hardware components Arduino MKR1000 × 1 LED matrix 8 x 8 (MAX7219) × 6 Jumper wires (generic) × 1 cardboard 40 cm x...... Listed under: [Game – Entertainment Projects](#), [Projects](#), [Wifi - WLan Projects](#)

866.   [Arduino Uno Rev3](#)   Arduino Uno is a microcontroller board based on the ATmega328P (datasheet). It has 14 digital input/output pins (of which 6 can be used as PWM outputs), 6 analog inputs, a 16 MHz quartz crystal, a USB connection, a power jack, an ICSP header and...... Listed under: [Battery Projects](#)

867.   [Arduino with ESP8266 – Reading Data from Internet](#) The ESP8266-01 has been a great module to quench all our thirsts for IOT projects. Since its release, it has developed a strong community and evolved into an easy to use, cheap and powerful Wi-Fi module. Another open-source platform which is much more popular is…… Listed under: [Wifi - WLan Projects](#)

868.   [Reef Controller](#) A Reef / Saltwater Aquarium controller based on an Arduino Mrk1000 and controlled remotely by an Universal Windows Platform app. Things used in this project Hardware components Arduino MKR1000 × 1 Adafruit Perma-proto board full size × 1 Adafruit I2C logic level converter × 1…… Listed under: [LED Projects](#), [Projects](#), [Temperature Measurement Projects](#)

869.   [How to Build an Air Guitar With Arduino, Aka the AIRduino Guitar](#) The idea here is to build a wearable virtual guitar that is to be controlled with two hands much like playing Air Guitar. It has been created and prototyped during a two weeks project at ChalmersUniversity (Sweden) for a Physical Computing class. The aim is…… Listed under: [Sound – Audio Project Ideas](#)

870.   [Space Race Game using Arduino and Nokia 5110 Graphical Display](#) Programming has always been fun and it just got a lot better with development platforms like Arduino. Almost every programmer out here would have tried to develop some kind of game using the language that they learning/practising. This helps them to tune their programming skills…… Listed under: [Game – Entertainment Projects](#)

871.   [Eggzact Science](#) Entry for the "World's Largest Arduino Maker Challenge" - An IoT Project with Windows10, the Arduino MKR1000, and Chickens.   Story Completed App - Home Page Completed App - Connection Page Completed App - Egg Overview Page Things used in this project Hardware components Arduino…… Listed under: [Internet – Ethernet – LAN Projects](#), [Other Projects](#), [Projects](#)

872.   [DIY Time Control Machine](#) This project is about how to make a time machine! This machine looks like a glove, and can "stop" any moving subject. At first, watch a video with some demonstration and experiments, guess how it works, and then read about how to make it =)…… Listed under: [Clock – Timer Projects](#)

873.   [Arduino Color Mixing Lamp using RGB LED and LDR](#) What if we can generate different colors using a single RGB led and make our room's corner more attractive? So, here is a simple Arduino based color mixing lamp which can change color when there is change in light in the room. So this lamp…… Listed under: [LED Projects](#)

874.   [ReSpeaker Home Automation](#) ReSpeaker Home Automation Sample using Arduino MKR1000, Microsoft Cognitive Service Speech API, Api.ai and MQTT Things used in this project Hardware components Seeed ReSpeaker Mic Array v2.0 × 1 Arduino MKR1000 × 1 LED (generic) × 2 Jumper wires (generic) × 1 Software apps and…… Listed under: [Home Automation Projects](#), [Projects](#), [Sound – Audio Projects](#)

875.   [Voice Controlled LEDs using Arduino and Bluetooth](#) Controlling LEDs with voice command seems to be a difficult task, but it's easy and you can quickly build it. We just need an Arduino UNO to serially communicate with HC-06 Bluetooth module and a smartphone to send voice command to Bluetooth module HC-06. For…… Listed under: [Bluetooth Projects](#)

876.   [Algorithmic Camera Trigger – Shutterino](#) Camera trigger powered by Arduino MKR1000 and controlled by the app. Let the algorithm take the best shots. Things used in this project Hardware components Arduino MKR1000 Any board with WiFi and support for Firmata protocol will work × 1 Servos (Tower Pro MG996R) ×…… Listed under: [Phone Projects](#)

877.   [Arduino Plays Piano Tiles](#) Ever wondered if your phone can play games by itself. Yes, it is possible. You can build a circuit to play Piano tiles on your smartphone. The video shows the demonstration of the project. Step 1: Components Required And the circuit can be built with…… Listed under: [Sensor – Transducer – Detector Projects](#)

878.   [Auto Intensity Control of Power LED using Arduino](#) Be a bright spark, lights off till it's dark!" sometimes we forget to turn off the lights and waste electricity and you must have also seen street light turned on in the day. We have already built few circuits on Dark detector where lights turn…… Listed under: [LED Projects](#)

879. [Component Designing in Proteus ISIS](#) Hello friends, hope you all are having fun in your life. Today's tutorial is about the component designing in Proteus ISIS. This tutorial actually deals with the presentation of your project. Usually when students give presentation of their projects, then it is asked that add…… Listed
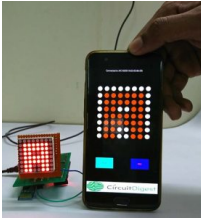
880. [Arduino RFID Door Lock](#) You have seen RFID Door Lock Mechanism in some Hotels and other places, where you don't need a key to unlock the room. You are given a card and you just need to put it in front of a RFID Reader box, and the lock gets unlocked…… Listed under: [Security – Safety Projects](#)

881. [Temperature Controled Charcoal Smoker](#) Use an Arduino MKR1000 to maintain a constant temperature in a charcoal smoker and allow monitoring over Wifi, Things used in this project Hardware components Arduino MKR1000 × 1 5V Brushless Blower × 1 MOSFET IRF520N Driver Module × 1 100K ohm NTC Thermistors ×…… Listed under: [Projects](#), [Sensor – Transducer – Detector Projects](#), [Temperature Measurement Projects](#)

882. [Interfacing of Seven Segment with Arduino in Proteus](#) Hello friends, today we are gonna have a look on how to interface Seven Segment with Arduino in Proteus. In my last post, I have posted an Arduino Library for Seven Segment Display, which is designed by our team and is quite basic in functionality……. Listed under: [LED Projects](#)

883. [Bluetooth Controlled 8×8 LED Matrix Sign Board Display using Arduino](#) Be it the long stretched highways or your doctors front door, we have sign boards placed everywhere to provide us information. But these sign boards are often boring and cannot be configured as per our interest from time to time. So in this project we…… Listed under: [LED Projects](#)

884. [IoT Santa Tracker on Colorful World Map](#) Use MKR1000 to show the Santa location in real-time on a colorful world map made of neopixels. Things used in this project Hardware components Arduino MKR1000 × 1 Raspberry Pi 3 Model B × 1 FR-1 Printed Circuit Board Blanks × 2 Translucent Colored Cast…… Listed under: [GPS Based Projects](#), [Projects](#)

885. [ADC value on LCD using Arduino](#) Hello friends, hope you all are fine and having good life. In today's project, we will see how to display ADC value on LCD using Arduino in Proteus ISIS. Its quite a simple project in which we are gonna measure the voltage of ADC pins…… Listed under: [LCD Projects](#)

886. [Arduino Based Piano with Recording and Replay](#) Arduino has been a boon for people who are not from the electronics background to build stuff easily. It has been a great prototyping tool or to try something cool, in this project we are going to build a small yet fun Piano using the…… Listed under: [Sound – Audio Projects](#)

887. [Wifi Enabled 2/4 Wheeled Robot Platform Utilizing MKR1000](#) WIP- Using a MKR1000 to create a WiFi Enabled 2/4 Wheeled Robot Platform, Hardware is in hand, now to implement software Things used in this project Hardware components Arduino MKR1000 I was one of 1000 who won this × 1 SparkFun Dual H-Bridge motor drivers…… Listed under: [Projects](#), [Robotics – Automation Projects](#), [Wifi - WLan Projects](#)

888. [LM317 Voltage Regulator in Proteus](#) Hello friends, hope you all are fine and having fun. In today's post we are gonna have a look at LM317 Voltage Regulator in Proteus. In the previous post, we have seen how to design a 5V Power Supply in Proteus ISIS, which I have designed…… Listed under: [Motor Projects](#)

889. [RGB LED Colour Control](#) In this project, we will learn how to control the brightness and colour of an RGB LED via I/O ports with PWM output capability, and a touch display sliders. The 4Duino resistive touch display is used as a means for a graphical interface to control…… Listed under: [LED Projects](#)

890. [Publish Any Event to Wia Using Your MKR1000](#) How to setup an MKR1000 and publish an event or location to Wia. Things used in this project Hardware components Arduino MKR1000 × 1 Software apps and online services Wia Hand tools and fabrication machines Wia Platform Story Setup Your Environment Install the Arduino IDE…… Listed under: [Internet – Ethernet – LAN Projects](#), [Projects](#)

891. [TIA Weak Artificial Intelligence IoT Assistant](#) IoT security/environment monitoring device with NFC & fingerprint authentication devices and a Weak Artificial Intelligence Assistant.   Things used in this project Hardware components Arduino UNO & Genuino UNO × 2 Arduino MKR1000 × 1 Solderless Breadboard Half Size × 1 SeeedStudio Grove Base Shield…… Listed under: [Projects](#), [Security – Safety Projects](#), [Sensor – Transducer – Detector Projects](#)
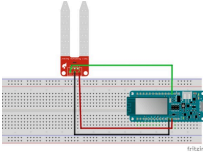
892. [Getting Started with Wi-Fi](#) In this project, we will learn how to get started with the ESP8266, an inbuilt 4Duino Wi-Fi module and connect to a local access point

893. [IoT System To Monitor Soil Moisture With Arduino](#) This IoT system monitors the soil moisture using Arduino and sensors. Data are sent to an IoT cloud platform to access it anywhere. Things used in this project Hardware components Arduino MKR1000 × 1 SparkFun Soil Moisture Sensor (with Screw Terminals) × 1 Software apps…… Listed under: [Projects](#), [Sensor – Transducer – Detector Projects](#)

894. [Send SMS with SIM900D in Proteus ISIS](#) Hello friends, hope you all are fine and having fun with your lives. Today, I am going to share a new exciting post on Send SMS with SIM900D in Proteus ISIS. In my previous post, I have shared the new GSM Library for Proteus, which…… Listed under: [Phone Project Ideas](#)

895. [DIY Ceiling Mounted Cable Robot Using Arduino Mega](#) An interesting Arduino project has been created by Nathaniel Nifong and kindly published to Reddit, offering insight on how to create your very own DIY ceiling mounted cable robot powered by an Arduino Mega development board. More commonly associated with sporting events cable robots offer…… Listed under: [Robotics – Automation Project Ideas](#)

896. [Time Stamp from Web Server](#) INTRODUCTION In this project, we will learn the basics of Transmission Control Protocol (TCP) and how to communicate to a webserver over TCP. We will request and receive packets from the Google web server using the above communication protocol. The 4Duino display is used to…… Listed under: [Wireless Projects](#)

897. [DC Motor Control using XBee & Arduino in Proteus](#) Hello friends, I hope you all are doing great. In today's tutorial, we are gonna design a project named DC Motor Control using XBee & Arduino in Proteus ISIS. I have shared the complete code and have also explained it in detail. You can also…… Listed under: [Motor Projects](#)

898. [Multiple mode Environmental Sensor Deck with MKR1000](#) Many fun environmental sensors need a hardware interrupt. With the MKR1000, you no longer need to choose! You get I2C, analog ins too! Things used in this project Hardware components Arduino MKR1000 × 1 MOD-1016 Lightning Sensor × 1 DFRobot MQ-9 Gas Sensor × 1…… Listed under: [Sensor – Transducer – Detector Projects](#), [Temperature Measurement Projects](#)

899. [Start Connect ARTIK Cloud with Arduino/Genuino MKR1000](#) Using Arduino/ Genuino MKR1000 to connect ARTIK Cloud control I/O light LED. Things used in this project Hardware components Arduino MKR1000 × 1 Software apps and online services Samsung ARTIK Cloud for IoT Story https://www.arduino.cc/en/Main/ArduinoMKR1000 A simple project let mkr1000 connect to artik cloud, but…… Listed under: [LED Projects](#), [Wifi - WLan Projects](#)

900. [Controlling Patient's Fever with Artik & Arduino](#) This project consists of 2 devices. the first one is wearable and monitors temperature, second one will control the temperature. Things used in this project Hardware components Arduino MKR1000 × 2 SparkFun Logic Level Converter - Bi-Directional × 1 Li-Ion Battery 1000mAh × 1 RGB…… Listed under: [Medical – Health based Projects](#), [Projects](#), [Tutorials](#)

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