

Mihir Ananthateerta

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EDUCATION

University of California, San Diego

San Diego, CA

B.S. Computer Science, GPA: 4.0

Expected Graduation: June 2028

- Relevant Coursework: Data Structures & Algorithms, Object-Oriented Programming (C++), Discrete Mathematics, Linear Algebra, Multivariable Calculus
- Achievements: USACO Gold Division, BellHacks Winner, Hyphen Hacks 3rd Place

EXPERIENCE

Software Engineering Intern – ASIC Verification

Jun 2026 – Present

Upscale AI

Santa Clara, CA

- Integrated ASIC scheduler RTL into a C++/Verilator test harness for cycle-accurate verification
- Developed pytest and GoogleTest regressions to compare C++ switch-model behavior against Verilated RTL
- Built a traffic driver to generate realistic Ethernet workloads, exposing a scheduler fairness bug
- Optimized the Verilated model for over 5x faster execution and parallelized builds to cut build time by 30%

VR Application Developer

Sep 2025 – Feb 2026

Assistive Technology Club

- Built an Apple Vision Pro app using Swift and visionOS for hands-free monitoring of neonatal vital signs
- Developed real-time vital-sign visualizations and an interactive spatial interface for clinical use
- Collaborated with a UCSD medical professor and student team on a project supported by Apple

Embedded Systems Developer

Dec 2025 – Jun 2026

Neurotech Club

- Helped create a drone system enabling real-time flight control via EEG headset signal processing
- Developed an ESP32 transport layer using ESP-NOW for low-latency computer-drone communication
- Serialized and routed MAVLink command packets between ground station and flight controller

PROJECTS

Cadence | *Next.js, Tailwind CSS, Gemini, TwelveLabs* | cadence.mihirdev.com | [Video Demo](#)

- Built a full-stack interview platform with local video recording and instant playback across 100+ sessions
- Designed a pipeline to send recorded responses to Gemini for transcription and technical evaluation
- Integrated TwelveLabs to analyze speaking delivery, score confidence, and generate targeted feedback

Chess AI | *C++, SDL2* | mihirdev.com/chess

- Implemented a C++ chess application with legal move generation, validation, and an SDL2 interface
- Developed an AI opponent using the minimax algorithm and optimized performance with alpha-beta pruning
- Achieved a consistent 1800+ Elo rating, placing the engine in the top 5% of online players

Business Index | *HTML, Next.js, Tailwind CSS, Firebase/Firestore*

- Built a Next.js website for schools to collect and search information on 100+ business and community partners
- Leveraged Firebase Authentication and Firestore for secure data storage and sub-second average load times
- Designed an intuitive user interface with Tailwind CSS

Healthy Messages | *Python, TensorFlow, Pandas, Matplotlib*

- Created an application to detect and block harmful online messages by analyzing message tone and intent
- Trained a TensorFlow-based sentiment analysis model to 90% test accuracy on 10K+ social media posts
- Integrated Instagram and YouTube APIs for real-time detection and removal of harmful content

TECHNICAL SKILLS

Languages: C++, Python, SystemVerilog, JavaScript, Swift, Java, C#

Web Technologies: HTML/CSS, React, Next.js, Tailwind CSS, Node.js

Tools: Verilator, Git, Claude Code, Cursor, Docker, Google Cloud Platform, Unity, Fusion 360

Libraries: pytest, GoogleTest, TensorFlow, PyTorch, OpenCV, Pandas, NumPy, Matplotlib, Pygame, SFML, SDL2