

# William Hsieh

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## Education

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### University of California, Los Angeles (UCLA)

*M.S. Computer Science*

**Jun 2025**

- GPA: 3.89/4.00
- Coursework: Advanced Deep Learning, Bayesian ML, Computational Genomics, Deformable Models, GPU Microarchitecture, IoT (Networks, Security), ML Hardware Optimization, Natural Language Processing

*B.S. Computer Science*

**Jun 2024**

- GPA: 3.75/4.00
- Coursework: Computer Architecture, Computer Security, Data Structures and Algorithms, Databases, Networks, Neural Signal Processing, Operating Systems, Programming Languages, Statistics

## Work Experience

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**Werfen** | *Software Engineering Intern, R&D*

**Jun 2023 - Sep 2023**

- Lead software internationalization process for blood clot detection devices
- Documented Linux VM development environment setup and wrote test cases for full app workflow
- Implemented dynamic language switching using C++, Qt Creator and Qt Linguist
- Wrote script for converting XML translation files to user-friendly files using Python
- Performed software verification and integration testing of features using Python
- Worked in Agile environment, conducted code reviews and created end-of-sprint demos

## Projects

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**LLM Hallucination Reduction** | *LLaVA, YOLOv8, Visual Contrastive Decoding (VCD)*

**Jun 2025**

- Implemented VCD and object segmentation to reduce LLaVA hallucinations by 5% over baseline
- Built detection dataset using YOLOv8 and active contours by generating precise object outlines

**VR Authentication** | *Python, RNN, Unity*

**May 2025**

- Trained RNN to classify VR users from Oculus Quest 2 movement data with 99% accuracy over 5s
- Applied security concepts including machine unlearning and dataset poisoning to RNN architecture

**Deep Learning** | *PyTorch, CNN, RNN, Transformers*

**Mar 2024**

- Trained models for 3D human mesh recovery and achieved 75% accuracy in EEG motion prediction
- Studied dense prediction, object detection, backpropagation, and optimization methods

**Autonomous Drones** | *Python, Fusion 360*

**Jan 2023 - Mar 2023**

- Modeled and built autonomous drone from scratch with custom 3D-printed and laser-cut parts
- Led team of 4 in autonomous flight development using MAVSDK-Python and onboard sensors

## Skills

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**Languages** | Python, C++, C, Verilog, SQL, JavaScript

**Frameworks/Libraries** | Qt, PyTorch, NumPy, scikit-learn, pandas, PostgreSQL, CUDA, LLaVA

**Other** | Unix, Git, Gerrit Code Review, Jira, Agile, Figma, Unity

## Activities

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**ACM Design** | *Co-President*

**Sep 2020 - Apr 2024**

- Led workshops for UI/UX, 3D modeling and vector art with class size of 50-60 members
- Designed graphics for all ACM sub-committees and initiatives
- Managed "Westwood Sans" project and created custom display font for club