

ALAN YU

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EDUCATION

University of California, Los Angeles (UCLA)

Los Angeles, CA

Bachelor of Science in Computer Science – 3.766 GPA

June 2025

Relevant Courses: Data Structures and Algorithms, Machine Learning, Natural Language Processing, Operating Systems

Relevant Student Organizations/Leadership: Upsilon Pi Epsilon – Corporate Director, Tau Beta Pi – Webmaster

Awards: Levi James Jr. Scholarship, Research Experience for Undergraduate (REU) Fellow, Siemens Foundation Scholarship

EXPERIENCE

Plaid

New York City, NY

Software Engineering Intern

June 2024 – September 2024

- Built decryption pipeline for 200 million rows, unblocked top company-wide project, and brought sprint back on schedule
- Constructed database with Apache Spark and Airflow to query sensitive AWS lakehouse resulting in 7 times faster lookup
- Completed capstone project, including stretch goals, three weeks early; received internship extension for second capstone

Tesla

Palo Alto, CA

Software Engineering Intern

September 2023 – December 2023

- Improved testing workflow by using CAN-Ethernet to flash and update firmware, resulting in 30 times faster execution
- Reduced excess logs by 98% as measured with average .CSV file size by implementing a Rust update on change program
- Fixed HTTP 429 error using Actix-Web and Rust allowing internal tools to access up-to-date information without timeout

Paramount

Los Angeles, CA

Software Engineering Intern

June 2023 – August 2023

- Architected ML-based video quality trade-off algorithm using frame complexity leading to 20 times faster runtime
- Resolved critical bug in ad-stitching for all video output by developing merging logic with 95% test coverage using Jest
- Created debugging tools in NodeJS using Docker, Kubernetes, and AWS for deployment and pre-production builds

General Atomics

San Diego, CA

Software Engineering Intern

June 2022 – August 2022

- Deployed written feature in mission control software for Sea Guardian Drone with over 10,000 real flying hours in India
- Led development of .NET video stream over UDP, processing radar data, synthesizing frames, and computing analytics
- Developed robust image decoder with full coverage using C# image library to process raw byte data to generate Bitmaps

Ozcan Research Lab at UCLA

Los Angeles, CA

Undergraduate Machine Learning and Optics Researcher

October 2021 – Present

- Co-authored ML [paper](#) in ACS, Twice Awarded REU Fellowship by NSF, Won “Best Poster” out of 30 research group
- Developed machine learning model by ray tracing non-monochromatic light in deep diffractive neural net using PyTorch
- Enhanced neural network classification by 2.4% by integrating majority voting over different images of same particle

TECHNICAL PROJECTS

Social Scan – LA Hacks (2023): [Github](#) | [Devpost](#)

April 2023

- Won 1st for best use of Microsoft Azure by integrating Azure maps, pins, and other features into Social Scan
- Crafted Front-End of Social Scan using React, allowing users to customize contact cards and view past connections
- Collaborated to integrate Firebase for data storage and user authentication to ensure secure and efficient handling of users

Google – Software Product Sprint: [Github](#)

June 2022 – July 2022

- Programmed a full-stack browser application allowing people to locate study spaces across four different universities
- Created a backend enabling fetched data from Google Datastore to update webpage using Java, JavaScript, and HTML
- Led UI design by composing page layout, cards, and maps and connected interactions between frontend and backend

Lockr – LA Hacks (2022): [Github](#) | [Devpost](#)

April 2022

- Achieved 2nd place overall, 1st Place in Best Life Hacks track, and DigiKey sponsored award in LA’s largest hackathon
- Implemented iOS app using SwiftUI and designed map and search elements to find nearby Lockrs to crowdsource objects
- Prototyped overall project design using Arduino hardware, a React and Google Firebase Kiosk, and a Swift client app

SKILLS

Programming Languages: Python (PyTorch, Numpy, Tkinter, Pytest), Golang, Rust, C++, JavaScript, HTML, CSS

Technical: Apache (Spark, Airflow), AWS (S3, Sagemaker, Glue), Git, Jenkins, TCP/UDP, Docker, Multithreading, Linux