

# Eugene Lo

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## Education

University of California, Los Angeles

exp. June 2022

B.S. IN COMPUTER SCIENCE AND ENGINEERING

3.94 GPA

## Work Experience

**Kinematics Manufacturing**

June - Sept. 2019

SOFTWARE ENGINEERING INTERN

- Optimized data processing and analysis of rotary dampers via signal processing and writing MATLAB scripts
- Created a web browser app to graphically predict the durability of slew drive worm gears using plotly.js (JavaScript plugin)
- Improved the efficiency of damper tests by writing a PLC program to automate servo motor
- Managed the Research and Development test area

**Institute of Electrical and Electronics Engineers**

Nov 2018 - July 2019

FULL STACK WEB DEVELOPER

- Assisted in making the IEEE project portal for members to keep track of their progress
- Developed responsive pages for the member roster and project checkoffs using HTML, CSS, JavaScript, and Vue.js
- Implemented the backend server and RESTful endpoints for users, projects, and assignments using Flask
- Maintained data persistence and relationships using SQLAlchemy

## Projects

**IDEAHacks Website**

July 2019

- Worked with a committee to develop this year's website for IDEAHacks, UCLA's hardware-based hackathon
- Implemented the hardware equipment reservation algorithm and team creation algorithm using jQuery
- Designed MongoDB database schemas to store user, team, and parts data
- Designed responsive frontend pages for team parts, parts inventory, parts checkout, and team creation

**Gesture-Based Music Controller**

May 2019

- Built remote control for Spotify desktop player based on motion gestures using IoT device with gyroscope and accelerometer
- Developed a serial communication controller to handle computer key binding signals using Pyserial and Pynput

**Zero Waste 2020 (LA Hacks)**

Mar. 2019

- Created a complete 2D platformer video game in Unity using C# about recycling and sustainability
- Implemented player movement algorithm and collectible item collision logic
- Rendered score and level UI components and configured camera control for optimal gameplay

**Zombie Dash**

Dec. 2018

- Created a shooter-survival video game with C++ for player to fight zombies and rescue hostages
- Developed player and zombie AI movement algorithms and UI elements for score, level, and lives
- Implemented game logic for power-up collisions, weapon usage, and infection

## Skills

**Programming** Python, C++, JavaScript, MATLAB, Java, HTML, CSS, VueJS, ReactJS, NodeJS/Express, Flask, MongoDB, SQL

**Other** Figma, Computer Hardware Assembly

## Extracurricular Activities

**Walnut Robotics**

Aug. 2014 - May 2018

ENGINEERING CAPTAIN

- Oversaw the mechanical and electrical process and design of the team robot
- Served as the main driver of the robot in all qualifier, regional, and super-regional level competitions

## Achievements & Recognition

2019 **Honor Societies** Tau Beta Pi

2018 **National Merit Finalist**, National Merit Raytheon Scholarship

2018 **Raytheon Management Scholarship**