Thomas Oh

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Education

University of California, Berkeley **Fall 2026**
Bachelor of Science in Mechanical Engineering, Minor in Computer Science GPA: 3.82
Relevant Coursework: The Structure and Interpretation of Computer Programs, Introduction to Solid Mechanics (Statics), Thermodynamics, Engineering Mechanics II (Dynamics), Fluid Mechanics, Manufacturing and Design Communication, Electronics for IoT, Dynamic Systems and Feedback (Controls), Introduction to Robotics, Introduction to Artificial Intelligence, Agentic AI

Projects

Combat Robotics at Berkeley September 2024 – Present

- Applied core engineering design principles to refine the team's 15lb robot, incorporating feedback from club leadership.
- Coordinated team efforts outside of meetings, delegating roles and tasks to optimize the battle bot's design and assembly process.
- Collaborated with a team to design, CAD, and build a 1 lb plastic robot with a budget of $100 and a 15 lb metal robot with a budget of $1500.
- Spearheaded the creation of a comprehensive bill of materials, streamlining the acquisition and integration of mechanical and electrical components for the 15 lb metal robot.

Autonomous Scanning Rover Spring 2025
ME100: Electronics for IoT

- Designed and built a rover in a 3-person team to autonomously map an environment and detect new objects by comparing subsequent scans.
- Developed the primary rover-side ESP32 code, integrating DC motors, encoders, and a servo-mounted dual-ultrasonic sensor array.
- Implemented a PID control algorithm to regulate motor velocity, correcting for movement and turning errors to improve path-following accuracy.
- Engineered the data-sending logic for the scanning system, transmitting distance and angle readings from the rover to a home ESP32 for analysis via ESP-NOW.

Work Experience

Berkeley Transfer Pre-Engineering Program Berkeley, CA
Design Assistant July 2025–August 2025

- Coached two teams of five students through the SPRINT design process to develop and prototype solutions for real-world problems.
- Delivered hands-on training in CAD (Onshape) and circuit design (Arduino Uno, Tinkercad) through guided lab sessions.
- Graded assignments and provided weekly constructive feedback to all team members to support skill development.

Fullerton College Math Lab Fullerton, CA
Tutor and Mentor October 2023–July 2024

- Coordinated with 3 professors and 5 other tutors to manage lab resources and support a daily flow of 20+ students.
- Provided tutoring to 5 to 10 students daily in single-variable and multi-variable calculus, linear algebra, and differential equations to help them with their homework and foundations.
- Created posters outlining the available resources provided by the math lab and other on-campus support.

Skills

Languages and Software: Python, ROS2, Linux OS, SQL, C++, C, MATLAB, Java, HTML, Microsoft Office, Latex
CAD: Fusion, AutoCAD, Onshape
Technical Skills: Soldering, Circuit design, Microcontrollers, 3D printing, Oscilloscope, Lathe, Mill, Drill Press, GD&T