

Isaac Ho

4th yr. Mechanical Engineering @ UCLA

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Education

University: *University of California, Los Angeles (9/2024 – Current)*

Mechanical Engineering B.S. | GPA: 3.5/4.0

Classes: Rigid Body Dynamics, Fluid Dynamics, Thermodynamics, Materials Engineering, Dynamic Systems, Mechanisms, Manufacturing Process

Community College: *Foothill College (9/2022 - 6/2024)*

Associate's degree for Transfer in Mechanical Engineering | GPA: 3.8/4.0

Experience

RoMeLa @UCLA | Undergraduate Researcher (9/2025 – Current)

Built a working replica of the “Kid Cosmo” robot featured in Netflix’s film “Electric State”. Operated and troubleshooted software for multiple robots in **Python** for demos. Currently researching ML for a humanoid prototype HERMES. **Prototyped** over 100 custom parts across multiple projects (**Solidworks**, **DFM**, **GD&T**, **3D printing**, **Machining**).

Bruin Formula Racing | *Driver Interface Team Member (10/2024 – 8/2025)*

Member of the Cockpit Team for the 2025 Bruin Formula Racing, SAE racecar. Revised brake assembly design on the MK X car using **SolidWorks** and helped develop a **MATLAB** algorithm to analyze the thermodynamics behavior of the rotors. Designed, **3D printed** and tested multiple versions of the pedal box.

Foothill Rocketry Club | *Rocketry Team Core Member (10/2023 – 4/2024)*

Core Team of the Foothill Rocketry Team and participated in Battle of the Rockets 2024. Designed, manufactured and assembled the parts, and gained heavy hands-on experience in **SolidWorks**, **3D printing**, **laser cutting** parts and **coating** surfaces.

Foothill Engineering Club | *RC Plane Project Design Lead & Robotics Arm Project Member (10/2022 – 3/2023)*

Design lead for the RC plane project. Designed the airframe and landing gear for a 6ft long, jet engine powered RC plane using **SolidWorks**. Team member for the robotics arm project and programmed the robotic arm with chess-playing logic in **C++**. Developed and assembled the robotic arm’s ‘hand’ which enables the machine to identify, grab and release chess pieces.

Kodely | *Kodely Leaders (4/2023 – 7/2023)*

Programming instructor for schools in Saratoga and Atherton with students of grades K-12. Taught **MakeCode Arcade** to younger students and **Python** to older students. Actively guiding students through game design projects and carry-out class plans and encourage logical thinking to develop computer programs.

Other Projects & Awards

1st Place XRC Lunar Lander ASME E-Fest (3/2024)

Participated in the ASME E-Fest XRC Lunar Lander Challenge and won 1st place. Designed a lunar lander with **Fusion** according to the competition’s specification, programmed the lander using **HyperSkill** by SimInsights to simulate the landing procedure and flight control.

Sudoku Solver Project (2/2024-3/2024)

Developed a sudoku puzzle solver in **MATLAB**. The program consists of 4 levels of solving logic for different levels of puzzle difficulty. Able to solve any puzzles of all difficulties from sudoku.com. Gained valuable experience in logical thinking and coding.

Wheel Design Project w/ Web Design (8/2023)

Designed over 20 unique wheel-rims using **SolidWorks**. Developed a website using **JavaScript** and **CSS** to display the designs. Gained experience in working with servers, web development and 3D designs.

Skills

Software: C++ | Python | MATLAB | SolidWorks | SolidWorks CAM | ANSYS | FEA | MS Office

Hardware: 3D Printing | CNC Machining | Prototyping | Soldering | Welding | GD&T

Languages: English | Chinese | Japanese

Soft Skills: Project Management | Problem Solving | Collaboration | Leadership | Creative Design

Portfolio – https://drive.google.com/file/d/17cQezSH5kMzMfQ62NLiaEEqnNXVPDwSr/view?usp=drive_link