Micah Hsu

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Education

UC Berkeley – B.S. Mechanical Engineering | *3.90 GPA* Expected May 2026

- Regents' and Chancellor's Scholar (top 2% of admitted students)
- Coursework: Composites, Machine Learning, MEMS, Robotics

Saddleback College – A.S. Physics | *4.00 GPA* Aug 2022 – May 2024

Professional Experience

Epirus – Mechanical Engineering Intern | *Torrance, CA* June – August 2025

- Designed and built a motor test bench replicating 10 Nm loads, ungating controls software verification.
- Built a cooling test stand for a 90hp outboard motor, allowing ~90% throttle increase for weapons testing.
- Rapidly prototyped and iterated a 10'x10', 15gpm rain simulator for water ingress verification testing.
- Assisted in assembly and machining modifications of first build of second-generation flagship product.

Applied Medical – Automation Engineering Intern | *Rancho Santa Margarita, CA* June – August 2024

- Designed a sorting mechanism with a 300ms cycle time for automated clip-forming machine.
- Programmed a pilot-phase PLC for coordinated motion control at 20% the cost of existing solutions.
- Coded semi-custom camera software on Ubuntu for machine monitoring and troubleshooting.
- Designed a portable unit for the software, allowing rapid setup of a machine monitoring system.

Hexagon Manufacturing Intelligence – Applications Engineering Intern | *Irvine, CA* June – August 2023

- Laser scanned and reverse engineered CAD models for 5 end-of-life extrusion dies, each up to 650lb and 32" in diameter, allowing custom manufacturing of the obsolete tooling.
- Wrote a CMM program to demonstrate automatic inspection of GD&T callouts in a CAD model's PMI.
- Co-taught certification courses of up to 6 customers on quality inspection with CMMs.

Project Experience

SC Robotics – Mechanical Team Lead | *Mission Viejo, CA* July 2023 – June 2024

- Owned mechanical development of a 50kg, 1.2 cubic-meter Mars rover, competing as the only community college in a worldwide competition and placing 17th of over 102 teams.
- Managed timeline, task delegation, CAD standardization, and PDM system for a sub-team of 8 members.
- Owned full development of a 6-DoF robotic arm with custom cycloidal gearboxes and 42" of reach.

Mechanical Engineer August 2022 – June 2023

- Designed, manufactured, and wired a 5-DOF robotic arm, placing 13th of 104 in arm events.
- Developed a novel wrist and end effector with a lead screw powertrain and compliant grippers.

Space Enterprise at Berkeley – Structures Engineer | *Berkeley, CA* September 2024 – May 2025

- Designed and fielded a thrust transfer structure and ignitor fixture for a rocket motor static fire.
- Constructed a reusable split-mold that allows efficient layup of identical 6" carbon fiber nosecones.
- Designed the lower sub-tube bulkhead housing recovery system cameras for an 8" rocket.

FRC Team 3476: Code Orange – CAD Engineer | *Irvine, CA* August 2021 – June 2023

- Designed and built a ball-control "hopper" and a telescoping arm that extends up to 19" in 0.5s.
- Collaborated on an intense 6-man pit crew at competitions and placed top 20 out of 3,300 teams globally.

Skills & Interests

Fabrication

- Mill/Lathe
- CNC Router
- FDM 3D Printing
- CMM/PCMM
- Composites

Software

- SolidWorks (CSWP)
- NX (Design Assoc.)
- Fusion 360
- MATLAB/Python
- C++

General

- First Principles
- DFM, DFA, GD&T
- Reverse Engineering
- CAM
- FEA

Hobbies

- Reading/Philosophy
- Piano/Guitar
- Chess
- A Cappella
- Pickleball