ELI FOERST

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efoerst

TECHNICAL SKILLS

Design & Modeling —
Altium, AutoCAD,
Microsoft Excel, Vernier
Graphical Analysis

Software — MATLAB, C++,
Python, Arduino IDE,
MultiSim

Hardware — Soldering -
Through-hole & surface-
mount, Circuit Design,
Breadboarding

OTHER SKILLS

Spanish — Intermediate
reading, writing, &
speaking.

Leadership — Club
management, workplace
organization & guidance.

URLs

Project Spec, *IDEA
HACKS ('22)* —

https://devpost.com/
software/sunscreen

SUMMARY

Undergraduate Electrical Engineering major with a variety of experience in a team environment. Projects involve printed circuit board design, schematic design, and microcontroller software. Seeking part-time Fall/Spring internship, full-time summer internship, and research opportunities in electrical engineering, aerospace engineering, and systems engineering.

EDUCATION

University of California, Los Angeles (UCLA) — BSEE Candidate Class of 2025
Relevant Coursework: Programming, Linear Algebra, Applications and Differential Equations, Engineering, Mechanics & Magnetism

PROJECTS & EXPERIENCE

NASA Jet Propulsion Laboratory (JPL) — July 2022 - September 2022
Electrical Engineering Intern — *Automated Safe-To-Mate Tester*
- Worked with Altium Design software for development in safety, accuracy, and automation of safe to mate for aerospace hardware.
- Implemented Kelvin Resistance models for application towards flight hardware.
- Analyzed completed break-out-box technical diagrams for hardware implementation in printed circuit board design.
- Conducted trade studies to evaluate component performance including wireless communication, voltage regulation, and signal multiplexing.
- Developed multiplexer switch identifier algorithms utilizing extended voltage range and pull-ups integrated into an Excel driven user interface.
- Designed and developed a comprehensible printed circuit board for reuse across JPL provided break-out-boxes and operating software for model-based control.
- Documented designs and progress with written reports, presentations, and schematic drawings to be shared with management and select clientele.
- Additional skills acquired: decoupling, SPI controlled interface technologies, and Bluetooth connectivity.

Institute of Electrical & Electronics Engineers — September 2021 - PRESENT
Electrical Engineering Project Member — *OPS*
- Collaborated with a team of engineers to design a hand-following car as project capstone. *Included skills:* PID control, motor and sensor calibration.
- Extended previous knowledge of Electrical Engineering through a series of projects inclusive of UART protocol, OLED operation, and microcontroller programming.

Electrical Engineering Hacker — *IDEA HACKS (Finalist '22)*
- Monitored outdoor complications to develop solution to UV light exposure.
- Designed small outerwear attachment for outdoorsmen with constraints of volume reduction, and global integration.

Stockroom Assistant, UCLA Samueli School of Engineering & Sciences — September 2021 - PRESENT
- Resolved complications with lab components and allotted time for product repair: Included repair of Multimeters via soldering and wire repair.

Service Industry Cashier; AZ — December 2020 - April 2022
Nekter Juice Bar, Abercrombie & Fitch, & Pei Wei Asian Kitchen
- Preserved communication amongst peers and management whilst regularly enhancing capabilities and training others in ever-changing work environment.

Engineering Projects In Community Service *(President)*— June 2019 - April 2021