

# Swetha Ashok

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## Summary

Electrical Engineering & Computer Science student at UC Berkeley with hands-on experience in robotics, CAD, hardware, and project management. Adept at translating engineering concepts into physical systems through design, prototyping, and systems integration. Seeking a technical role to leverage my skills in engineering leadership and development of innovative, ethical, and inclusive technological solutions.

## Education

### University of California, Berkeley

Berkeley, CA

B.S. Electrical Engineering and Computer Science • GPA 3.6 • Expected Graduation May 2028

**Relevant Coursework:** Python, Java & Data Structures, Signals & Systems, Discrete Math and Probability Theory

**Expected Completion Spring 2026:** Circuits & Devices, PCB Design, C & Computer Architecture

## Skills & Interests

**Hardware:** PCB Design, soldering, sensor testing, subsystem integration, debugging

**Software:** Python, Java, C, RISC-V, Github

**CAD:** SOLIDWORKS, Onshape, Autodesk Fusion 360, ANSYS (FEA), KiCAD

**Languages:** English (Native), Tamil (Native), Spanish (Conversational)

**Interests:** Audio Mixing, Violist and Audio Director of university film orchestra

## Experience

### Calsol – Solar Racing Team

#### Solar Project Manager (Current)

August 2024 – PRESENT

- Lead a 20+ member team responsible for solar module wiring, bypass diode soldering, and cell integration.
- Integrating the solar array into battery via MPPT, coordinating with electrical and mechanical teams on cross-functional requirements.
- Optimized rib and lightening holes layout using SOLIDWORKS and ANSYS structural simulations.

### Society of Women Engineers

#### Academic Chair (Current) • Advocacy Chair

August 2024 – PRESENT

- Encourage students to pursue higher education by introducing professors, graduate students and lab researchers.
- Advocated for underrepresented students in engineering and served as collegiate representative for the National SWE Disability Inclusion Affinity Group.
- Strengthened cross organizational collaboration in the College of Engineering through social and professional events

### FIRST Robotics Competition Team 2643

#### President • Project Manager • Safety Captain

August 2020 – May 2024

- Directed the design, wiring, and testing of multi-sensor robotic systems for 50+ member team.
- Maintained the robot's master CAD assembly; coordinated mechanical, electrical, and software teams
- Integrated subsystems with motor controllers, encoders, and vision sensors to create reliable, competitive robots.
- Documented engineering practices to support safety and reliability during development.

### Retro Synth

#### Co-Designer and Developer

January 2026 – PRESENT

- Collaborated with a three-person team to design and build a fully function 12 note PCB synth.
- Designing schematics using KiCAD and managing BOM to meet performance and budget constraints