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

Experience

CalSol – Solar Racing Team

Solar Project Manager 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 solar panel layout using SOLIDWORKS and ANSYS structural simulations.

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.

Society of Women Engineers

Advocacy Chair • Equity and Inclusion Working Body Co-Chair August 2024 – PRESENT

- Advocate for underrepresented students in engineering and serve as collegiate representative for the National SWE Disability Inclusion Affinity Group, strengthening communication and cross organizational collaboration
- Organizes events on workplace equity, resilience and self-advocacy
- Revitalized E&I Working Body with the goal of identifying policy improvements to support engineers.

Java Exploration Game

Co-Designer and Developer

Collaborated with a teammate to build a 2D, grid-based exploration game in. Contributing to design decisions, state management logic, and real-time user interaction components. Strengthens skills in object-oriented programming, collaborative development practices, and designing systems with clear functional requirements.

Skills & Interests

Hardware: Soldering, sensor testing, subsystem integration, multimeter debugging

Software: Python, Java, Github

CAD: SOLIDWORKS, Onshape, Autodesk Fusion 360, ANSYS (structural simulations), KiCAD

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

Interests: Exploring robotics and HCI, audio engineering (violist and audio director for university film orchestra)