

# Hannah Cutler

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## Education

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### UC Santa Barbara

*Bachelor of Science (B.S.), Electrical Engineering*

Santa Barbara, CA

*Expected June 2027*

## Work Experience

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### REU Researcher, University of California, San Diego – San Diego, CA

June 2024 – Present

- Selected as one of 10 participants from across the country to conduct engineering research in collaboration with Scripps Institute of Oceanography.
- Working in a 4-person team to develop the 3rd generation Smartfin, to passively collect and transmit oceanographic data in the costal surf-zone.
- Investigating temperature changes along costal surf-zones via the Smartfin device and the Scripps pier.

### Hardware Development Intern, Hikari Medical Technologies – Santa Barbara, CA

Jan 2024 – Present

- Utilizing iterative design process to design and improve a functional and wearable housing for the device, to align lens, laser diode, and sensor (AS7263) while keeping device dimensions under 50mm x 40 mm.
- Regularly communicating complex electrical and computer engineering principals to individuals in diverse disciplines.
- Manufacturing 3 separate microfluidic devices for use in biological experiments, informed by specifications and explanations by expert biologists.

### Controls Hardware Member, Formula SAE – Santa Barbara, CA

Oct 2023 – Present

- Utilizing wiring harness software RapidHarness to collaboratively design and manufacture a functional and cost-efficient wiring harness for final car in a team of 3.
- Translating wiring harness diagrams from software to ordering list, utilizing CAD models to ensure correct wire length measurements.
- Leveraging Fusion360 to design printed circuit boards (PCBs), combining 2-3 sensors into a board. Uphold PCB design best practices to maintain uniformity with Gaucho Racing designs.

## Leadership Experience

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### External Vice President, SWE-UCSB – Santa Barbara, CA

May 2024 – Present

- Contacting and maintaining relationships with 90+ companies to support club finances and networking opportunities.
- Proposing and instituting new initiatives such as SWE Tech Team @ UCSB that work to close the gender gap in engineering graduates.
- Organizing annual Evening With Industry event with 75+ participants, up to 20 sponsors, and thousands of dollars of investment.

## Projects

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### Plant Nursery

- Maintaining 20+ plants and propagations, consistently pruning, watering, and adding nutrients as needed.
- Diagnosing plant nutrient deficits from leaf color, soil consistency, and rigidity of the plant. Created organizational chart for accurate plant treatment and watering schedule.

## Technical Skills

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Plant propagation, Printed Circuit Board (PCB) design, Python, C++ , Java, Fusion360, AutoCAD, Altium, through hole and SMD soldering.