# Jonathan Siskind

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## CAREER OBJECTIVE

*Self-motivated and detail-oriented engineering student with extensive project-based experience in mechanical, electrical, and software design seeking to apply hands-on skills and an execution-focused attitude in mechanical engineering and mechatronics.*

## EDUCATION

**Stanford University**                                                                                                               **Stanford, CA**
Bachelor of Science in Mechanical Engineering                                                   Expected Graduation: June 2026
GPA: 3.99

**Purdue University**                                                                                                            **West Lafayette, IN**
*Non Degree Student (advanced coursework taken during high school)*                           *August 2021–May 2022*

## WORK & EMPLOYMENT

**Zipline**                                                                                                                   **South San Francisco, CA**
*Powertrain and Battery Intern*                                                                                 *June 2025–September 2025*
- Developed a series of machines and fixtures for the battery manufacturing line to rapidly scale up production volume by 4x.
- This includes designing the complete electrical and software system for an automated high-power compression machine, several mechanical fixtures for gantry robots, and a test device used to find critical flaws and validate over 200 vehicle batteries in the field.

**Monterey Bay Aquarium Research Institute**                                                                                   **Monterey, CA**
*Mechatronics and Mechanical Engineering Intern*                                                            *June 2024–August 2024*
- Designed, constructed, and tested an ocean current data logger for a coastal profiling float (CPF) – a device that uses closed loop PID depth/velocity control to take chemical measurements of ocean health within a water column (pH, oxygen, salinity, temperature, etc).
- Developed the automated data logger from the ground up, incorporating embedded systems (interrupts, double buffering), electronics (STM32 microcontroller, lithium batteries, fuses, linear regulators) mechanical design (CAD, fabrication), and testing design (MATLAB, signal processing).
- Conducted rigorous testing, quality checks, and analysis on the data logger in simulated ocean conditions.

**Stanford Robotics Lab**                                                                                                            **Stanford, CA**
*Undergraduate Researcher*                                                                                   *January 2023–September 2023*
- Conducted both full and part-time robotics research as the only undergrad in the lab.
- Developed a series of hardware and software upgrades to the handheld camera used by the teleoperated underwater exploration robot Ocean One K. This included the implementation of a tethered ethernet live camera feed to stream Raspberry Pi video to the surface, buoyancy leveling to minimize underwater roll, the integration of an LCD screen inside the camera housing for easier troubleshooting for the user, and optical correction of underwater lens distortion for sharper and clearer video.

**Curious Cardinals**                                                                                                                **Stanford, CA**
*K-12 Engineering Mentor*                                                                                        *July 2023–November 2024*
- Taught a wide set of fundamental, applied engineering skills including CAD, electronics/circuitry, programming, and more through mentorship to 16 students and helped them pursue personally-tailored, hands-on engineering projects.

## PROJECT EXPERIENCE

**Stanford Space Initiative**                                                                                                        **Stanford, CA**
*Polar Rover Team Lead*                                                                                         *September 2022–March 2025*
- Lead the Mars division in Stanford Space Initiative; manage the subteam's 40 students and $20,000 yearly budget.
- Currently leading the development and system-wide integration of an autonomous, solar-powered, GPS-navigated rover with internet and LiDAR path-planning that will drive across Antarctica to the South Pole.
- Designed and built a customized aluminum tracked chassis for the rover, designed large solar panel mounts, and developed the complete onboard electronics stack including lithium batteries, the Starlink-driven communications system, a sensor platform, microcontrollers, motor drivers, and more.

**Maker Faire**                                                                                                           **Various Locations: IN, WI, PA**
*Independent Engineering Projects*                                                                                    *March 2020–Present*
- Personally designed and built a fully-functional remote-controlled submarine with differential steering, several servos/actuators, ballast depth control, and live underwater vision AND a robotic ornithopter with motorized flapping wings and a pan-tilt two-axis tail.

## SKILLS & INTERESTS

- Proficiency in NX, SolidWorks, Fusion, and Onshape CAD software; modeling, assemblies, and drafting
- Experienced in MATLAB, C, C++, Python
- 7 years of working with Arduino/Raspberry Pi/Mango Pi/STM32 microcontrollers
- 7 years of workshop/power tool skills, machining (mill/lathe/casting), sheet metal forming, 3D printing