ERIC J. CATALANO

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EDUCATION

University of California, Berkeley
- B.S. Electrical Engineering and Computer Science
- Expected May 2029

EXPERIENCE AND ACTIVITIES

Space Technologies and Rocketry (STAR) – Avionics Engineer
June 2025 – Present | Berkeley, CA
- Design and fabrication of 3+ PCBs for Actuator Board, PT board, and Power Distribution System, handling schematic design, component selection, by Altium and KiCad
- Develop a deployable payload with a solar panel charging, LiFePo4 battery, enabling 24/7 live telemetry beacon transmission for post landing rocket recovery and localization
- Designed a launchpad quick disconnect system that keeps onboard battery fully charged before launch, getting rid of pre-launch power waste
- Install and harness flight sensors (pressure, IMU, GPS, thermistors) through the rocket, routing wiring and connectors for reliable and robust data acquisition.
- Leading architecture and sensor selection for next year's flight computer, integrating triple redundant accelerometers, IMUs, GPS, and barometers for robust, fault-tolerant avionics.

Berkeley Formula Racing (BFR) – Electrical Team member
Aug 2025 – Present | Berkeley, CA
- Design custom PCB for "Shifting Lights' System using ESP32 microcontroller
- Prototype circuits for LED indicators, buck converters, and Li-Ion battery management
- Collaborating with firmware and mechanical sub teams to integrate electronics into vehicle systems
- Design custom 9-DoF IMU board for the car, to track real time data on the vehicle, for performance analysis and control

VEX Robotics Team 94517X – Team Lead / Programmer & Driver
Aug 2021 – May 2025 | Clayton Valley Charter High School, CA
- Designed and developed full competition ready VEX robots, for state, regional, and global events.
- Led optimization of 5 key subsystems, enhancing robot functionality and competition performance by 55%.
- Implemented motion profiling based PID control system to tune gains through iterative calibration, reducing steady-state error by 50% and increasing robot response time by 35%.
- Mentored younger students on CAD, programming, and Hardware fostering team growth and future generations of robotics.

Wente Scout Reservation – Office Manager / Camp Counselor
Summer 2025(8 weeks); Summer 2024(5 weeks); Summer2022(3 weeks) | Willits, CA
- Managed Camp wide operations and scheduling for 500+ campers weekly
- Led staff training and mentored junior counselors on safety and teaching

TECHNICAL SKILLS
- Programming: Python, C/C++, MATLAB, SQL, Java, Scheme,
- Hardware Tools: Altium, KiCad, LTSplice, PlatformIO,
- Software: AutoDesk Fusion 360, VS Code, Git, Onshape

LEADERSHIP & VOLUNTEERING

Boy Scouts of America – Troop 317/484
2017 – Aug 2025 | Concord, CA
- Achieved Eagle Scout rank after leading full engineering focused service project, designing and building shelving for Clayton Valley Charter HS Engineering Department
- Senior Patrol Leader, Assistant SPL, Troop Guide; led youth leadership