

LAUREN JONES

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CAREER OBJECTIVE

Pursuing a computer engineering internship with a focus on PCB design or embedded software systems. I look forward to improving my circuitry design, hardware integration, and low-level programming skills.

EDUCATION

CALIFORNIA POLYTECHNIC UNIVERSITY, SAN LUIS OBISPO, CA

AUG 2022–PRESENT

Bachelor of Science, Computer Engineering.

ST. FRANCIS HIGH SCHOOL, SACRAMENTO, CA

AUG 2018–MAY 2022

EXPERIENCE

CAL POLY RACING BAJA SAE

SEP 2022–PRESENT

Electronics Lead

JUNE 2023–PRESENT

- Designed 2 PCBs in Altium.
 - Semi-Active Suspension PCB features a STM32 microcontroller that drives 4 solenoid valves.
 - Debugged working PCB: drives a solenoid, communicates over CAN, has software scalable PWM.
 - Radio PCB that facilitates wireless data communication and features an Xbee, STM32, and 12V to 3V3 buck controller.
- Designed a 12V to 5V buck controller schematic for the car's powerboard PCB.
- Designed a solenoid driver schematic that features overcurrent protection.
- Continuing to build a Graphical User Interface (GUI) that interacts with and fully controls the parameters of data on a live web server hosted on an ESP32.
- Creating an XBee network system that communicates with a Data Acquisition PCB (DAQ) through CAN.

Electronics Member

SEP 2022–JUNE 2023

- Created design of a live webserver GUI; Created an Xbee network architecture for wireless data communication.
- Wrote software in C++ for various car projects: lookup tables for the transmission and sensor integration.

GENESEAS ROBOTICS

AUG 2019–JULY 2022

Software Lead and CMO

- Developed a Remotely Operated Vehicle (ROV) designed to perform a variety of marine sustainability tasks through [MATE Robotics](#). Geneseas placed 4th overall at the MATE ROV World Championships.
- Created a new system of power-limiting algorithms in C++ that control the parameters of thruster outputs.
- Developed a GUI in Python with full software control of vision and image and live video recognition systems.
- Created an array of marketing posters and a 25-page technical report using Adobe InDesign. Geneseas' Marketing Display placed 1st at the World Championships and was published in the Journal of Ocean Technology.

AEROSPACE MUSEUM OF CALIFORNIA

JUNE 2022–AUG 2023

STEM Summer Camp Counselor

- Taught STEM curriculum in three disciplines: Aviation, Space, and Engineering to over 625 students.

SECURE AUTOMOTIVE CONTROL FIRMWARE, MIT

JULY 2021

- Developed firmware and bootloader updates encrypted by AES-128 GCM and HMAC SHA-256.
 - Firmware defends against Man in the Middle attacks, buffer overflows, cryptographic signature attacks, and flash memory read attacks.

SKILLS

- Programming Experience: C, C++, Python, HTML, CSS, Javascript.
- Cisco Networking Certifications: Cybersecurity Essentials, Introduction to Cybersecurity, Introduction to Packet Tracer, Linux Unhatched.
- Technical Skills: Cybersecurity, Cryptography, Network Security, Arduino, Git, Altium PCB Design, Circuit Design.
- General Skills: Photography, Videography, Adobe: After Effects, Premiere Pro, Lightroom, Photoshop, InDesign.