

ERIC SHERMAN

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Education

UNIVERSITY OF PITTSBURGH, SWANSON SCHOOL OF ENGINEERING
Bachelor of Science in Computer Engineering

Expected Graduation: April 2023
Cumulative GPA: 3.985

LANGUAGES/TECHNOLOGIES: C++, C, Python, Unit Testing in C, ARM-Cortex-M MCUs, LabVIEW, MATLAB, Linux, STM32CubeIDE, Keil, Git, Confluence, Jira

CAD SOFTWARE/FABRICATION: Altium Designer, Fusion 360, LTSpice, Autodesk Eagle, 3D Printing, Soldering, Populating PCBs

AWARDS AND HONORS: First Year Success Award, Dean's List, Honors Academic Standing

Relevant Experience

TESLA

HV BATTERY ELECTRONICS INTERN

Palo Alto, CA
January 2021–May 2021

- Upcoming 15-week internship working on battery management solutions for the HV Battery Electronics team.
- Expected tasking includes board bringup / validation, creating automated functional testers, and performing failure analysis.

GECKO ROBOTICS

ELECTRICAL ENGINEERING INTERN

Pittsburgh, PA
May 2020–January 2021

- Designed and developed a localization module for two different robot platforms using modern localization solutions.
- Demonstrated proof of concept by prototyping on a breadboard using an STM32 micro-controller and selected sensors.
- Designed hardware (custom PCBs) that implements the localization solution. Ran simulations in LTSpice for the schematic design.
- Implemented firmware for the localization module which consisted of writing event-driven state machines in C.
- Wrote unit tests using a C test framework for the I2C module as well as added repeated start support.

NSF CENTER FOR SPACE, HIGH-PERFORMANCE, AND RESILIENT COMPUTING (SHREC)

UNDERGRADUATE RESEARCH VOLUNTEER

Pittsburgh, PA
August 2020–Nov 2020

- Supported testing of Configurable and Autonomous Sensor Processing Research (CASPR), to be sent to the International Space Station as part of the Space Test Program - Houston 7 mission.
- Designing a debug / evaluation PCB that interfaces with CASPR hardware to assist with testing and verification.

PCB TEAM MEMBER – SUMMER UNDERGRADUATE RESEARCH GROUP (SURG)

May 2020–August 2020

- Received *first place prize* for project featuring a PCB that enables a stepper motor to be operated in closed-loop control.
- PCB features current and voltage monitoring and interfaces with a motor driver, hall-effect sensor, OLED display, and encoder.

NAVAL AIR WARFARE CENTER AIRCRAFT DIVISION

ENGINEERING INTERN/RESEARCHER

Lakehurst, NJ
June 2019–August 2019

- Programmed, tested, and simulated motion of a new testing platform equipped with 3 linear actuators.
- Analyzed simulation data containing pitch and roll angles; succeeded in replicating them using the actuators.
- Populated and tested circuit boards using common lab equipment such as soldering irons, oscilloscopes, and multimeters.
- Automated data collection process for a research project using LabVIEW. Assisted mitigating electrical noise comprising the data.

Selected Projects

FUTORI SIX-AXIS ROBOT ARM (ELECTRONICS GARAGE)

June 2019–Present

- Developing a 3D printed, mini-industrial robot arm. Gearboxes, stepper motors, bearings, belt drives incorporated into the build.
- Soldered and wired thumb joysticks onto a protoboard for controlling the motion. Programmed using C++ on an Arduino.
- Manage Instagram account (@electronics_garage) with over 1150 followers that features progress on the robot arm project.
- Founded a community of makers working on their own robotic arms; actively engage and consult with them.

TARTANHACKS – HACKATHON AT CARNEGIE MELLON UNIVERSITY

February 8-9, 2019

- Awarded *ScottyLab's Grand Prize* for project that features a text to braille converter, built in less than 24 hours.
- Wired and built a small case with six servo motors installed, which serve to create bumps on a smooth surface.

Activities and Organizations

ROBOTICS AND AUTOMATION SOCIETY – UNIVERSITY OF PITTSBURGH

DIRECTOR OF TECHNOLOGY (FORMER DIRECTOR OF OPERATIONS)

Pittsburgh, PA
September 2019–Present

- Focused on guiding the technical direction of the club, supporting project leads, and providing the best resources for members.

OTHER ORGANIZATIONS AND VOLUNTEERING

- Emerging Leaders Program, Disability Resources and Services Notetaker, Pitt Institute of Electrical and Electronics Engineers
- Completed 86 hours of community service throughout high school and college through voluntarism with various organizations.