# ERIC SHERMAN

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## Education

**UNIVERSITY OF PITTSBURGH, SWANSON SCHOOL OF ENGINEERING** *Expected Graduation: April 2023*
***Bachelor of Science in Computer Engineering*** *Cumulative GPA: 3.985*

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

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

**AWARDS AND HONORS:** 2019 ScottyLab's Grand Prize Winner (at Carnegie Mellon's Hackathon, Tartanhacks – awarded for a text to braille convertor using servo motors), First Year Success Award, Dean's List, Honors Academic Standing

## Relevant Experience

**SPACEX** *Brownsville, TX*
*STARSHIP ENGINEERING INTERN* *May 2021–August 2021*
- Upcoming 12-week internship working on SpaceX's interplanetary vehicle, Starship, with expected tasking in manufacturing.

**TESLA** *Palo Alto, CA*
*HV BATTERY ELECTRONICS INTERN* *January 2021–May 2021*
- Upcoming 15-week internship working on battery management solutions for the HV Battery Electronics team.
- Expected tasking includes board bring up / validation, creating automated functional testers, and performing failure analysis.

**GECKO ROBOTICS** *Pittsburgh, PA*
*ELECTRICAL ENGINEERING INTERN* *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 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)** *Pittsburgh, PA*
*UNDERGRADUATE RESEARCH VOLUNTEER* *August 2020–November 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.
- Designed 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** *Lakehurst, NJ*
*ENGINEERING INTERN/RESEARCHER* *June 2019–August 2019*
- Programmed, tested, and simulated motion of a new testing platform equipped with 3 linear 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 1200 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.

## Activities and Organizations

**ROBOTICS AND AUTOMATION SOCIETY – UNIVERSITY OF PITTSBURGH** *Pittsburgh, PA*
*DIRECTOR OF TECHNOLOGY (FORMER DIRECTOR OF OPERATIONS)* *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.