

## EDUCATION

Olin College of Engineering  
Robotics Engineering

May 2022

## SUMMARY

I'm a multidisciplinary engineer with a passion for developing and maintaining systems that drive positive global change. I have experience with software development, customer support, project management, and user-centered design. I'm looking to transition to a collaborative and user-focused role where I get to translate stakeholder needs into requirements, and bridge the gap between the human and the technical.

## SKILLS

**SOFTWARE DEVELOPMENT:** Python, Linux Development, ROS2, Git, Docker, BigQuery, SQL, GCP

**MECHANICAL DESIGN:** Solidworks, Onshape

**PROJECT MANAGEMENT:** Notion, Jira, PowerBi, Agile Methodologies, Google Suite

**DESIGN SOFTWARE:** Adobe Illustrator, Adobe Photoshop, Adobe Lightroom

## EMPLOYMENT

### RIGHTHAND ROBOTICS

Software Engineer II

June 2022 to July 2024

- Working as a member of the Sustaining software team at a leading warehouse robotics automation company
- Performed debugging and root cause analysis for software, hardware, and electrical bugs on deployed robots
- Worked with stakeholders to better understand needs and pain points, translating into requirements for internal software teams
- Collaborated with internal software teams to implement and validate fixes for diagnosed issues
- Maintained close relationship with the Support team and Solutions team to ensure critical issues resolved in timely manner for the customer
- Integrated and merged new features/fixes into a large (>300 kLOC) Python codebase
- Utilized tools such as BigQuery SQL and PowerBi to assess and monitor robot performance KPIs

### ELECTRIC BOAT

Undergraduate Research Opportunities Program

Sept. 2021 to May 2022

- Utilized stakeholder requirements to create a systems-level design for an ultra-high-precision underwater magnetic field probe
- Led meetings with client to ensure solution utility and fit throughout design process
- Created Python-based magnetometer calibration and verification routines
- Developed firmware for an STM32-based platform to read and fuse multiple sensors to achieve orientation-corrected magnetic field readings

### MACHINA LABS

Robotics Engineering Intern

June 2021 to Sept. 2021

- Diagnosed timing and loop overrun bugs in a real-time robotic controls application
- Integrated new production functionality into a mature codebase
- Implemented kernel-level configuration to optimize Python-based control loop jitter
- Used multithreading to parallelize runtime objectives and increase code performance

### NASA-FUNDED ASTEROID DISCOVERY RESEARCH

Research Assistant

Jan. 2020 to Sept. 2020

- Worked under Dr. Carrie Nugent to build a software pipeline to discover near-Earth asteroids in archival data
- Addressed complex parameter optimization issues by creating Python scripts for image processing and modification

## PROJECTS

### SUN-TRACKING SOLAR ARRAY AT WOODLAND HARVEST MOUNTAIN FARM

Sept. 2020 to May 2021

- Developed 2 DoF pan/tilt mechanism for sun-tracking of a 1kW, 300 lb solar array
- Created control loops to actuate motors for desired array orientation
- Utilized pyranometer and accelerometer sensor data for active sun-tracking and orientation determination

### OLIN COLLEGE OF ENGINEERING CAPSTONE

Aug. 2021 to May 2022

- Developed OAE device from scratch for affordable infant hearing screening in Latin America
- Constructed analog filters for audio signal processing
- Designed PCB adapter with microphone amplification to fit inside OAE probe