Florian Schwarzinger

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fschwarzinger.com

Skills

- **Programming**
  - Python
  - Java
  - GitHub/GitLab
  - ROS
  - MATLAB
  - Arduino
  - JavaScript
  - Golang
  - C++
- **Computer Aided Design**
  - SolidWorks
  - OnShape
- **Machining**
  - Lathe
  - Mill
  - Welding
  - Plasma Cutting
  - Sheet Metal Forming
- **Fabrication**
  - Laser Cutting
  - FDM Printing
  - Resin Printing
- **Software**
  - Office Suite
  - Adobe Suite

Activities

- **Fire Spinning**
- **Rock Climbing**
- **Legends of Runeterra**

Education

Olin College of Engineering Needham, MA
Bachelor of Science in Engineering with a concentration in Robotics
Recipient of 4-year 50% Tuition Merit Scholarship
Graduation: May 2023

Experience

UW - Applied Physics Laboratory Seattle, WA — June 2021 - August 2021
Ocean Engineering Intern
Modified commercially avalible ROVs, from scratch, to enable autonomous following of one ROV by another utilizing Python, ROS, and OpenCV. Integrated external sensors into the preexisting ROV architecture.

RailState Somerville, MA — September 2020 - April 2021
Hardware/Embedded Software Intern
Assembled and performed quality assurance (QA) on units to meet specific requierments. Automated device set-up and QA process using Python. Wrote programs to monitor unit health, network connection, and other critical stats.

Olin IT Helpdesk Needham, MA — October 2019 - Present
Student Worker
Works with users to troubleshoot and fix broken devices and software issues. Manages and maintains a campus-wide network of computers and connected devices, and setup AV systems for presentations/events.

Projects

All projects can be found in more detail on my portfolio (fschwarzinger.com).

Robotic Tug-Boat — February 2020
Wrote functions in Arduino Code to make a robotic tug-boat follow a specified target using object detection. Created an arbiter to take movement commands from multiple functions, process the information, and arbitrate which command should be followed.

Rubik's Cube Solver — February 1, 2020 - February 2, 2020
Wrote a Python program in under 24 hours to solve a Rubik's cube and send instructions to a microcontroller for a project that was one of the winning entries for MakeHarvard2020. Optimized the program using graph data structures and multiple search algorithms later.

Shadow Boxing Robot — October 2019 - December 2019
Worked on the mechanical portion of a robot designed to mirror a person's movement. Designed and assembled a 2 degree of freedom (DOF) hip joint, a 2 DOF shoulder joint, and a 1 DOF elbow joint using OnShape and SolidWorks.