Florian Schwarzinger

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fschwarzinger.com

Skills

- **Programming**
  - Python
  - Java
  - GitHub/GitLab
  - OpenCV
  - ROS
  - Arduino
  - MATLAB
  - JavaScript
  - C++
- **Computer Aided Design**
  - SolidWorks
  - OnShape
- **Machining**
  - Lathe
  - CNC Mill
  - Welding
  - Plasma Cutting
  - Sheet Metal Forming
  - CAM
- **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, GPA: 3.38

Experience

ThayerMahan Groton, CT — May 2022 - December 2022
Research and Development Intern
Utilized Python and OpenCV to continuously capture and stitch together 360-degree thermal panorama. Worked on development and calibration of autonomous jetski. Developed Arduino code for whale blow simulator.

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.

Olin IT Helpdesk Needham, MA — October 2019 - Present
Student Worker
Work with users to troubleshoot and fix broken devices and software issues. Manage and maintain a campus-wide network of computers and connected devices, and setup/run AV systems for crucial 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.