



Florian Schwarzingner

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fschwarzingner.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 available 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 2018 - Present

Technical Support

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 (fschwarzingner.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.