

ISAAC VANDOR

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EDUCATION

Olin College of Engineering

B.S. Robotics Engineering 2019

Relevant coursework includes Mechanical Prototyping, Fundamentals of Robotics, Principles of Engineering, Quantitative Engineering Analysis
4 year, half-tuition merit scholarship recipient

PROJECTS

Olin Aquatic Robotic Systems

2015 to Current

- Team Coordinator/Electrical Subteam PM
- Developed a fully autonomous 4.3m-long sailboat capable of performing complex computational tasks (i.e. computer vision, autonomous navigation, station-keeping) on the water with no human input
- Responsible for electrical system design and implementation using Solidworks Electrical suite, Autodesk Circuits, Upverter, and Onshape

Olin Submersible Vehicles Lab

2016 to Current

- Founded a submersibles lab at Olin to build a fleet of autonomous underwater vehicles for remote sampling missions
- Vehicles utilize a common control system and software architecture adapted from aerial vehicles and surface vessels
- Focus on vehicle interoperability using ROS, on-board computing power, and a common communications platform

HI Tag App Platform

2015 to 2016

- Designed and developed a technology platform for tagging and tracking economically important species of fish
- Created an Android app, a new RFID-based tag, and a web interface to provide data to ocean researchers and biologists
- Presented research results at IEEE Oceans '16 and served as session chair

EMPLOYMENT

Naval Undersea Warfare Center Division Newport

Tactical Unmanned Vehicle Systems Intern · May 2017 to Aug 2017

- Creation of a payload autonomy system utilizing ROS (Robot Operating System) and C++ to parse messages from a Remus unmanned underwater vehicle into the ROS-based message format, enabling compatibility with a wide range of payload autonomy solutions
- Currently hold a Secret level security clearance

Olin Robotics Lab

Lab Administrator · 2015 to Current

- Coordinate robotics projects with outside sponsors including NOAA, Woods Hole Oceanographic Institute, Scientific Systems, Office of Naval Research, and others
- Manage 30+ students across 5 teams focusing on designing, developing, and testing autonomy for underwater vehicles, surface vessels, fixed wing and multirotor aerial vehicles, and eusocial robots

Olin College of Engineering

Rapid Prototyping Assistant · 2016 to Current

- Responsible for operating and maintaining rapid prototyping workshop for all engineering majors - 350+ students
- Teach rapid prototyping design and fabrication best practices
- Trained operator/instructor on Stratasys Dimension 1200es 3D printer, Shopbot CNC Router, and Markforged Mark Two 3D Printer

Olin Robotics Lab

Robotics Researcher · 2015 to Current

Designing autonomous systems for specific use cases including

- A fast, lightweight drone for use in GPS-denied environments
- A waterproof drone for use in photographing and determining dimensions of whales
- Autonomous landing capabilities between a drone and an unmanned surface vessel

SKILLS

DESIGN: Solidworks, Onshape, Adobe Creative Suite, Circuit Design, Esprit, Grabcad, Autodesk Fusion 360, LaTeX

FABRICATION: 3D Printing, CNC/Manual Mill, Lasercutter, Lathe, Composite 3D Printing, CNC Router, Soldering

SOFTWARE: Python, HTML + CSS, Arduino, Matlab, ROS, C/C++, Linux, Upverter, RECON