# ISAAC VANDOR

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## EDUCATION

Olin College of Engineering
B.S. Engineering: Robotics 2019

## EXPERIENCE

### Olin Robotics Lab · 2015 to Current
Lab Administrator/Senior Researcher

Coordinated with multiple private engineering firms and government contractors on robotics research in developing unified controls systems for submersible and surface aquatic vessels, ground vehicles, and fixed wing and multirotor unmanned air vehicles. Managed multiple student teams in designing, developing, and testing various levels of autonomy in robotic systems.

### DP Technology · 2013 to 2015
Software Quality Assurance Intern

Managed quality assurance team for Esprit, an integrated CAD/CAM software package. Coordinated with engineers across projects to develop better tools and user experiences.

### University of Haifa Maritime Civilizations Department · 2014 to 2014
Field Expedition Intern

Excavated a bronze age harbor and placed findings in the context and historical importance of a maritime-based economy on the development of culture.

## PROJECTS

### Olin Aquatic Robotic Systems - PM/Electrical Coordinator
Developed a fully autonomous 4.3meter long sailboat capable of performing complex computational tasks on the water with no human input. Responsible for electrical system design and implementation.

### HI Tag Platform - PM/iOS Development
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 interested in studying these species. Presented results from platform testing at IEEE Oceans '16 (Also served as a session chair).

### Kinetic Sculptures - Mechanical Design/Fabrication
Designed and fabricated a kinetic sculpture powered by a small DC motor and a second, entirely wind-powered sculpture using numerous fabrication techniques. Developed a full CAD package and design report intended to highlight each of the various mechanical design and prototyping techniques used in the process.

### Facial Recognition Program - Software Development
Developed a program for facial recognition using various matrix analysis techniques, including the eigenfaces method and principle component analysis. Wrote a paper to analyze the effectiveness of these techniques in recognizing faces across datasets and compared the success of the program with other facial recognition methods.

### Pan/Tilt IR Scanner - Rapid Prototyping/Software Design
Developed a pan/tilt scanner using an infrared sensor to scan a 3-dimensional object. Responsible for mechanical design of the system and printing the system using 3D printed Onyx material with heated inserts embedded to mount servos and sensor components.

## SKILLS

**PROTOTYPING/MANUFACTURING**
3D Printing
CNC/Manual Mill
Lasercutter
Lathe
Soldering

**DESIGN**
Solidworks
Onshape
Adobe Creative Suite
Circuit Design
Esprit

**PROGRAMMING**
Python
HTML + CSS
Arduino
C
Matlab
Swift