KEVIN MACAULEY

kevinmacauley13@gmail.com | (508) 965-8452 | LinkedIn

TECHNICAL SKILLS

- ROS, C++, Python, Golang, Java, Typescript, Git, Linux, Docker, Concourse
- Solidworks, MATLAB, Inventor, Arduino, Excel, Office Suite, Google Suite

ENGINEERING EXPERIENCE

Engineering Assistant, *Woods Hole Oceanographic Institution*, Woods Hole, MA | May 2022-December 2022

- Supported Dr. Yogesh Girdhar on the continuous improvement of CUREE, an autonomous underwater vehicle designed for visual and acoustic coral reef monitoring in the WARPLab.
- Wrote software and developed analog electronics for a hydrophone array used in acoustic data acquisition.
- Designed and modified mechanical components such as skid supports for the vehicle and dome port front housing which contained two stereo cameras sets.

Software Engineer, *Oasis Systems*, Boston, MA | May 2020-December 2020**,** June 2019-August 2019

- Contracted to work for the United States Air Force at the Kessel Run Experimentation Lab software factory.
- Independently developed a real-time collaboration app built on React.js and Golang.
- Presented product progress during weekly branch meetings with senior leadership, collaborated effectively with members of the product team, and represented the team company-wide.

Manufacturing Operations Intern, *Cogmedix*, West Boylston, MA | June 2021-August 2021

- Collaborated in the continuous improvement of manufacturing processes using lean and 6S principles in an FDA-regulated and ISO 13485 certified medical device manufacturing environment.
- Developed material flow carts to reduce cycle time and increase the quality of assembled products.

RESEARCH

Robotics Engineering, Applied Controls, and Haptics Lab (REACH), *University of Wisconsin*, Madison, WI | August 2021-Present

- Developing human-in-the-loop software that can automatically determine the object model, pose and articulation for a user-specified set of points, leveraging nonlinear fitting and the interactive closest point algorithm for intra-vehicular activities at NASA.
- Worked on the refactor and parallelization of this code from Python to C++ which drastically reduced the fitting time of the algorithm.

EDUCATION

The University of Wisconsin-Madison, *College of Engineering* | Expected Graduation: May 2023

- *Major*: B.S. Mechanical Engineering**, GPA: 4.0.**
- *Senior Design Project:* Designing a vectored buoyancy control device for WARPLab's CUREE so that different sensors can be dynamically swapped without sacrificing vehicle performance.
- *Relevant Coursework:* Intro to Robotics, Intro to Artificial Neural Networks, Measurements and Instrumentation.
- *Scholarships:* William J. Landman Scholarship (2022), LyondellBasell Futures in the Chemisphere Scholarship (2021), Sarin Family Scholarship (2020), Armed Forces Communications & Electronics Association (AFCEA) Fellowship Award (2019).
- *Extracurriculars:* Human Powered Vehicle Club, Cycling Club, Roundnet Club.

LEADERSHIP

Vice President, *Wisconsin Cycling Club*, Madison, WI | May 2022-Present

- Oversee and conduct general club functions including liaising with University Sport Club Leadership, running recruitment, organizing and leading group rides twice weekly, and making organizational decisions.

Club Advisor, *Wisconsin Human Powered Vehicle Club*, Madison, WI | May 2022-Present

- Responsible for club organizational decisions, interfacing with the College of Engineering and other general club functions.

Eagle Scout, *Boy Scouts of America, Troop 2*, Marlborough, MA | Completed: October 2018

- Attained the highest rank in the Boy Scouts through a service project honoring local veterans with a memorial flagpole and plaque at a local baseball field.

Massachusetts Boys State Delegate, Easton, MA | June 2018

- Alumnus of the American Legion's highly competitive leadership and citizenship program.