

Maurice Roland Capitulo-Ampane

617-842-9938 | mampane@olin.edu | [linkedin.com/in/mampane/](https://www.linkedin.com/in/mampane/) | mampane.com

Availability: Winter 2024 and Summer 2025

EXPERIENCE

6 River Systems (Ocado Group)

Waltham, MA

Robotics Software Intern

Summer 2024 - Present

- Developed a patent pending robot detection system using C++, Python, and ROS2
- Created a simulation in Gazebo and used Rviz2 for rapid prototyping and optimization of the detector
- Implemented detector using C++ to decrease CPU usage by over 80%
- Integrated the detector into the existing robotic software stack

Olin Electric Motorsports (Formula SAE Electric)

Needham, MA

Accumulator Subteam Lead

Summer 2023 - Summer 2024

- Led a team of 12 engineers in the development and manufacturing of a 6-segment, 400-volt modular battery pack, designed to power a high-performance Formula-style electric vehicle
- Oversaw the design and development of battery segments, enclosure, and safety system
- Designed and implemented a safe fusible links testing setup for optimizing battery design with MATLAB

Dive Technologies

Quincy, MA

Robotics Intern

Fall 2021 - Spring 2022

- Programmed a location plotter to track an AUV using python
- Optimized geometry for buoyancy foam manufacturing using SOLIDWORKS

PROJECTS

Gesture Controlled Robot | Python, ROS2, OpenCV, Scikit-learn

- Trained a Scikit-learn neural network to classify 9 unique hand gestures for teleoperation control, switching between behaviors, and playing sound
- Used OpenCV to compile the training dataset and for live classification
- Implemented and integrated a finite state machine in Python using ROS2 with the classifier

Voice-Operated Robot Assistant | Python, ROS2, TensorFlow, AprilTags

- Trained a TensorFlow neural network to classify 4 unique voices using spectrogram data
- Used Google Speech-to-Text for teleoperation control, setting robot position, and item retrieval, behaviors controlled by a ROS2 finite state machine in Python
- Used AprilTags and YOLO v8 for item identification and SORT for item tracking

EDUCATION

Olin College of Engineering

Needham, MA

Bachelor of Science: Computer Engineering (GPA: 3.8)

May 2026

- Relevant Coursework: Computational Robotics (Python / ROS2), Machine Learning (Python / MATLAB), Software Design (Python), Principles of Integrated Engineering (C++)
- Computational Robotics and Machine Learning Course Assistant

SKILLS

Languages & Frameworks: Python, C++, ROS2, Tensorflow, MATLAB

Web Development: HTML, CSS, Flask, Django, Markdown

Tools & Platforms: Linux, Git/Github, Jira, Wireshark, SQL, Simulink, LaTeX

Data Formats: XML, Xacro, YAML

Other & Personal Interests: RA (Resident Assistant), Fire Arts, Hiking, Teaching, Acting