

Education

Worcester Polytechnic Institute <i>Masters of Science in Robotics Engineering</i> 4.0 GPA	Worcester, MA 2025–2027
University of North Carolina at Charlotte <i>BS in Computer Science Concentrating in Robotics & Minor in Mathematics</i> 3.81 GPA	Charlotte, NC 2022–2025

Experience

WPI Automata Lab <i>Research Assistant</i> – Worked on solving high-level plans using Satisfiability-Modulo-Theorem solvers – Created a generic benchmark tool to create random scenarios and compare solver types	Worcester, MA Oct 2025 – Present
University of North Carolina at Charlotte <i>Instructional Assistant</i> – Taught three different courses: Tangible Computing, Mobile Robotics, and Intelligent Robotics – Taught classes of approximately 40 students robotics programming via ROS2 – Converted Instructional Materials and Assessments from ROS1 to ROS2 – Designed and implemented a Docker image to replace the previous virtual machine solution	Charlotte, NC Aug 2023–May 2025
Undergraduate Researcher – Designed a simulation tool using ROS2 and IsaacSim to simulate multi-robot algorithms and track success rates – Developed an algorithm to stitch 3D colored point clouds from multiple RGB-D Cameras (Intel RealSense) – Researched impact of real-world data in assignments for intro CS classes on engagement	Aug 2022–Dec 2025
Rugged Robotics <i>Software Engineering Intern</i> – Developed Multi-Robot logging tools to quickly locate, debug, and solve problems – Built a tool that automatically compiles logs across a fleet of robots and generates completion reports for clients – Decreased sim2real gap for their bespoke simulation suite	Houston, TX May 2024–Aug 2024
HEBI Robotics <i>Software Developer Intern</i> – Designed a UX flow that would communicate with the robot and reconfigure itself to best control the robot and implemented it in a cross-platform robot control app using Flutter and Dart	Pittsburgh, PA May 2022–Aug 2022
4th Vector Technologies <i>Machine Vision Intern</i> – Built classical machine vision solutions and trained machine learning models to solve vision problems – Designed, manufactured, and assembled electrical boxes containing computers, PLCs and sensors for deployment	Apex, NC May 2019–Jan 2022

Projects

Gold Rush Robotics (IEEE RAS Student Branch) President – Led a group of approximately 40 students to build and compete in two different robotics competitions each year – Designed custom PCBs for power and data management – Generated Synthetic training data for YOLOv7 training for custom object detection – Presented a talk at ROScon 2025 (Odense, Denmark) showcasing work with CAN-FD and microROS	Aug 2022–May 2025
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Skills

Programming Languages: Python, C++, Bash, MATLAB, $\text{\LaTeX}$, Java, Julia, Flutter, Dart, Javascript (Vue, Node)
Programming Concepts: Parallel/Distributed Computing, Computer Vision, Multi-Robot Systems, Machine Learning, High Performance Computing, Simulation, Controls, Networking (TCP/IP, UDP)
Code Tools: ROS, Git, Linux, Docker, IsaacSim, Gazebo, SQL, Protobuf, CMake, Colcon, GitHub Actions, TravisCI
Other Tools: Onshape, KiCAD, Fusion360, Adobe Creative Cloud Suite, Google Suite, Microsoft Office Suite
Physical Skills: 3D Printing, Soldering, Surface Mount Soldering, Laser Cutting, CNC Milling (Haas), CNC Embroidery, Water Jet, Physical Prototyping, Logic Analyzer, Multimeter