

Logan Boswell

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EDUCATION

Northwestern University
Master of Science in Robotics

Evanston, IL
Expected: December 2025

Georgia Institute of Technology
Bachelor of Science in Mechanical Engineering (Highest Honors)
Concentration in Automation and Robotics

Atlanta, GA
May 2024

EXPERIENCE

GrayMatter Robotics

Robotics Engineering Intern

Carson, CA
Jun 2025 - Present

- Automating clear acrylic surface finishing through wet sanding and polishing with FANUC M-710 robots
- Modifying Dockerized ROS/ROS2 packages in C++/Python to extend hardware support and functionality
- Calibrating hardware, integrating a high-res camera, and tuning parameters to minimize finishing distortions

Georgia Tech Research Institute

Student Assistant - Part Time

Smyrna, GA
Jan - May 2024

- Collaborated with electrical engineers to design housings and mounts for RF systems using SolidWorks
- Operated mills, water jets, and sheet metal folders to fabricate components for electro-mechanical systems

Chick-fil-A Corporate Support Center

Equipment and Systems Engineering Co-Op

Atlanta, GA
Jan 2022 - Aug 2023

- Developed code libraries using Python, C++, and Git for an automated frying mechatronic system
- Modeled an electric heater in SolidWorks to meet strict size and watt density specifications
- Created a user-friendly GUI with Python and PyQt5 to streamline operation of an automated frying system

PROJECTS

Cable-Driven Parallel Robot (In Progress)

Spring, Fall 2025

- Currently designing a planar cable-driven parallel robot in Onshape for underwater applications
- Implementing low-level motor control in C++ with a Teensy 4.1 and ODrive S1 drivers over a CAN bus
- Developing a ROS2 package for communicating with the microcontroller and operating the system

Ping Pong Robot from Scratch

Winter 2025

- Designed and built a 3-wheeled omnidirectional robot using Onshape and rapid prototyping methods
- Developed a ROS2 package in C++ for operating the robot and integrating kinematics with computer vision
- Utilized OpenCV, AprilTags, and a RealSense camera for ping pong ball object detection and tracking

7-DOF Pool-Playing Robot

Fall 2024

- Collaborated with a team of 5 to develop a Python ROS2 package for a Franka Panda arm to play a game of pool
- Wrote a Python ROS2 API wrapper to plan and execute trajectories using MoveIt2
- Modeled and printed custom pool cues in Onshape to achieve a better fit with the Franka gripper

Propeller-Driven Balance Beam Control System

Fall 2023

- Guided a team of 4 to design two PID controllers to balance a ball in the center of a beam and reject disturbances
- Built a testing setup equipped with a microcontroller, drone motors, ESCs, an IMU, and a linear potentiometer
- Wrote code in C++ to incorporate PID controllers for stabilizing an inherently unstable physical system

SKILLS

Robotics: ROS/ROS2, Control Systems, Embedded Systems, MoveIt, Nav2, OpenCV, RVIZ, Gazebo

Software: C++, Python, C, Embedded C, MATLAB/Simulink, LabVIEW, Linux, Git, CMake, Docker, Unit Testing

Hardware: SolidWorks/NX/Onshape, EagleCAD, Machining, 3D Printing, Soldering, Microcontrollers, FEA