Logan Boswell

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EDUCATION

Northwestern University **Evanston, IL**
Master of Science in Robotics Expected: December 2025

Georgia Institute of Technology **Atlanta, GA**
Bachelor of Science in Mechanical Engineering (Highest Honors) May 2024
Concentration in Automation and Robotics

EXPERIENCE

GrayMatter Robotics **Carson, CA**
Robotics Engineering Intern Jun - Sep 2025
- Automated clear acrylic surface finishing through wet sanding and polishing with Fanuc M-710 robots
- Extended Dockerized ROS/ROS2 packages using C++ and Python to support high-resolution camera inspection
- Optimized finishing process parameters to remove scratches and defects while minimizing distortions

Georgia Tech Research Institute **Smyrna, GA**
Student Assistant - Part Time 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 **Atlanta, GA**
Equipment and Systems Engineering Co-Op 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