

# LIAM JENNINGS

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## OBJECTIVE

Robotics and embedded systems engineer with experience in embedded software, hardware testing, and system-level design. Skilled in STM32 microcontrollers, PCB design, sensor integration, PID control, and Python automation. Looking to contribute to innovative robotics or embedded systems projects, solve complex engineering challenges, and collaborate with other engineers.

## EDUCATION

### Worcester Polytechnic Institute (WPI), Worcester, MA

Bachelor of Science in Computer Science, GPA: 3.94 / 4.0

May 2025

Minor in Chinese Studies, GPA: 4.0 / 4.0

Master of Science in Robotics Engineering, GPA 3.75 / 4.0

Expected May 2025

## SKILLS

**Languages:** C, C#, Java, C++, Python, MATLAB, Mandarin Chinese (Intermediate)

**Software & Technologies:** Linux, Embedded Programming, Git, Robot Operating System (ROS), SOLIDWORKS CAD CSWA

## WORK EXPERIENCE

### Hardware Test Engineering Co-op, Symbotic, Boston, MA

Jul 2025 – present

- Designed test procedures and fixtures for robotic subsystems (PCBs, actuators, embedded hardware).
- Automated log file parsing and visualization in Python, reducing debugging time by 40%.
- Validated hardware using oscilloscopes, CAN analyzers, and DAQ systems; documented results and recommended design improvements.

### Backend Computer Security Software Intern, STR, Boston, MA

May - Aug 2022

- Developed a diagnostic tool in .NET and C# to introspect live .NET applications and document data structures, object classifications, and memory addresses. Used by team members to aid in the development of other projects.

## PROJECTS & ACTIVITIES

### WPI Formula Electric 2025 Electronics Team, WPI

Aug 2024 - present

- Developed a high-performance electric race car as part of the 2024–2025 Formula SAE Team.
- Designed and programmed mixed-signal STM32-based PCBs for sensor data collection.
- Led development of a Bluetooth driver radio system for real-time ground team communication.
- Created maintainable and reliable electronic systems for the 2025 Formula Electric competition.

### Racecar Telemetry Dashboard, WPI

Jan - July 2024

- Designed and built an onboard data collection system and driver display.
- Collected real-time CAN messages from onboard sensors and graphed data for debugging.
- Utilized C++, Linux, Raspberry Pi, and open-source libraries.

### Sliding Mode Control for UAV Interception, WPI

Oct - Dec 2023

- Led a Team project that designed a simplified UAV interception system with a quadrotor in a Matlab simulation
- Designed a sliding mode controller to control individual rotor torques based on system dynamics
- Implemented a state prediction system based on parabola fitting to accurately predict UAV kinematics

### Sustainable Waste Management Initiative, IIT Mandi, India

Jan - May 2024

- Interviewed students, villagers, and officials to assess waste practices and co-authored recommendations for the Institute.