Liam Jennings

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OBJECTIVE

Software and robotics engineer and student with practical experience building automated tooling, embedded systems, and distributed hardware/software integrations. Skilled in C++, Python, Rust, Linux development, and CI/CD workflows. Looking to contribute to innovative robotics or embedded systems projects, solve complex engineering challenges, and collaborate with other engineers.

EDUCATION

Bachelors in Computer Science, Worcester Polytechnic Institute (WPI) August 2021 - May 2025

with Minor in Chinese Studies, GPA: 3.93/4.0

Masters In Robotics Engineering, WPI August 2024 - Dec 2026

GPA: 3.75 / 4.0

SKILLS

Languages: C, C++, Python, Rust, Java, Typescript, MATLAB, Mandarin Chinese (Intermediate)
Software & Technologies: Linux, Git, CI/CD, ROS, Docker, Embedded Programming, CAN Bus, SolidWorks CAD (CSWA)

EXPERIENCE

Hardware Test Engineering Co-op, Symbotic, Boston MA July - December 2025

- Designed and validated embedded and electromechanical subsystems for large-scale robotic automation systems.
- Built automated Python tools for log parsing and time-series visualization using InfluxDB, reducing debugging time by 40%.
- Used Git, unit testing, and CI/CD to improve reliability and maintainability of internal automation tools.
- Debugged robotic subsystem hardware using oscilloscopes, CAN analyzers, logic analyzers, and DAQ systems.
- Collaborated with software, electrical, and mechanical teams to ensure system-level reliability.

Backend Computer Security Software Intern, STR, Boston, MA May - August 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 AND ACTIVITIES

WPI Formula Electric 2025 Electronics & Software Team August 2024 - Present

- Developed and designed STM32-based mixed-signal PCBs for real-time sensor acquisition on a Formula SAE electric racecar.
- Implemented a Bluetooth-based communication system for live telemetry and driver-ground communication.
- Contributed to reliable embedded systems using Git, Linux, and structured testing.

Racecar Telemetry Dashboard, WPI Jan - July 2024

- Designed and built a real-time telemetry system using C++, Linux, Raspberry Pi, and CAN bus.
- Implemented time-series logging and live visualization for debugging vehicle performance.

Sliding Mode Control & Motion Planning for UAV Interception, WPI October - December 2023

- Designed a sliding mode controller and implemented predictive kinematic modeling using MATLAB.
- Developed a simplified motion planning pipeline for quadrotor interception.

ROS Robotics Development, WPI 2023 - 2024

- Developed TurtleBot3 and robotic arm simulations in ROS/Gazebo, including Deep Q-Learning, TF chains, screw kinematics/dynamics modeling.
- Built and tested systems with joint-level control, RViz visualization, and motion planning pipelines.

Sustainable Waste Management Initiative, IIT Mandi, India January - May 2024

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