

Fiona Prendergast

Software and Robotics Engineer

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EDUCATION

Worcester Polytechnic Institute — Worcester, MA

Aug 2022 — Present

B.S. Computer Science and Robotics Engineering — GPA 4.0/4.0

Anticipated Graduation May 2026

Academic Honors: Tau Beta Pi Engineering Honor Society, Dean's List (all semesters), Academic All-Conference (3 years)

Coursework: Unified Robotics Series, Software Engineering, Human-Computer Interaction, Machine Learning, Control Engineering, Database Systems

SKILLS

C/C++, Python, Java, SQL, JavaScript; ROS 2, React, Next.js, Flask, Git, AWS Cloud Development; Embedded Systems, Controls, API Design, User Research; Advanced Spanish

WORK EXPERIENCE

Product Development Intern — Blueleaf Wealth Inc.

Jun 2023 — Present

- Designed a custom REST API for financial advisory software, using Postman to build a mock API that unblocked parallel frontend and backend development
- Led UX discovery by analyzing client feedback to diagnose pain points, then implemented targeted improvements across web and mobile platforms

Embedded Systems Engineering Intern — DCS Corporation

Jun 2024 — Aug 2024

- Developed a GNSS simulation tool replicating satellite navigation data over serial communication, enabling hardware-in-the-loop testing without live GPS signals
- Built a responsive Python GUI to interface simulation software with production hardware to simplify verification

Integrations Software Engineering Intern — Vestmark, Inc.

Jun 2025 — Aug 2025

- Refactored legacy financial exchange code in Java, reducing cognitive complexity and achieving 100% unit test coverage
- Designed and deployed an AWS migration proof-of-concept for custodial adapter systems using EC2, VPN, and SFTP

Undergraduate Teaching Assistant — WPI Computer Science Department

Aug 2024 - Present

- Supported students in Operating Systems and Human-Computer Interaction courses through office hours, grading, and project feedback

PROJECTS

Automated Robotic Parachute Packing System — Senior Capstone Project

Present

- Architected a modular ROS 2 system with 5 custom packages featuring asynchronous action servers, service-based coordination, and configurable launch modes
- Integrated dual stereo cameras, ESP32 microcontroller, and WidowX-200 robotic arm with custom kinematics for automated parachute line stowing

Ecuadorian Women's Microfinance Platform — Research Project

Spring 2025

- Conducted user research with 20+ women's microfinance groups in Cuenca, Ecuador and collaborated with the Vice Mayor's office to validate platform requirements
- Designed and developed a responsive web platform featuring an amortization calculator, document repository, and directory system

Autonomous Maze Navigation Robot — Unified Robotics Final Project

Spring 2025

- Programmed a TurtleBot to autonomously map and navigate unknown environments using ROS and SLAM, fusing lidar and odometry for real-time localization
- Implemented Kalman filter-based position estimation for accurate dead reckoning and landmark-based correction

LEADERSHIP & INVOLVEMENTS

- **WPI Women's Soccer**, Team Captain

2022 - Present

- **Student Athlete Advisory Committee**, Chair

2023 - Present

- **Alpha Xi Delta Women's Fraternity**, Finance Director

2022 - Present

- **Eagle Scout**, Founding member of Scouts BSA all-female Troop 65

Awarded Nov 2021