Fiona Prendergast

Software and Robotics Engineer

978.505.8077
fkprendergast@wpi.edu
linkedin.com/in/fiona-prendergast/
https://fionaprendergast.vercel.app/

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*
- Built and deployed client financial app on live Expo Go deployment pipeline using React Native, implementing custom visual themes, graphics from live financial data API, industry standard authentication, and custom gesture interactions
- Designed a custom REST API for financial advisory software, using Postman to build a mock API that unblocked parallel frontend and backend development

Embedded Systems Engineering Intern — DCS Corporation   *Jun 2024 — Aug 2024*
- Developed in-house testing data simulation tool replicating satellite navigation (GNSS) 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*