

Kevin Siegall (They/Them)

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EDUCATION

Worcester Polytechnic Institute

B. S. Computer Science; B. S. Robotics Engineering

May 2025

Worcester, MA

- Relevant Classes: *Deep Learning For Perception, AI for Robotics, Swarm Intelligence, Software Engineering, Webware*
Unified Robotics: Actuation, Sensors, Manipulation, Navigation, Mobile & Ubiquitous Computing

WORK EXPERIENCE

OpenSTEM: Experiential Robotics Platform (XRP)

Aug 2022 – Present

Lead Software Developer, XRPLib

Worcester, MA

- Spearheaded the development of an extensible open source MicroPython library built for classroom use with small robots
- Managed a team of varied size over 2.5 years, while communicating with corporate partners and engineers from Sparkfun, DEKA
- More details about the project can be found at <http://experientialrobotics.org>

Smartapp.com – Robotics Branch

May 2024 – Aug 2024

Autonomy Engineering Intern

Worcester, MA

- Extended upon a Python and React-TS thrust test stand hosted on a Raspberry Pi, with extensible datalogging and test procedures
- Developed an intuitive and flexible motor library, which enables ‘hot-swapping’ of intelligent motor classes and objects
- Utilized reinforcement learning to train a controller for robotic movement, proving the concept despite limitations

Jacobs Technology – Jacobs Software Engineering Center

May 2022 – Aug 2022

Software Engineering Intern

Hudson, NH

- Operated in an Agile environment on a WPF-based application running on .NET Framework
- Expanded upon an in-house product, used to add and sort SQL filters to be applied to the DAFIF database
- Exercised object-oriented techniques such as dependency injection and encapsulation in C#

PROJECTS

Terrawarden Drone Cleanup – Major Qualifying Project

Aug 2024 – Present

- Developing a drone capable of detecting and collecting litter found on roadsides and highway medians, in a team of 6
- Currently creating a perception stack to allow for fast and efficient detection and segmentation in open areas, using an Intel RealSense

Robotic Navigation – SLAM and AMCL

Oct 2023 – Dec 2023

- Robot autonomously navigated and mapped an unknown space, and was able to localize within that space later
- Utilized a Turtlebot3 robot with a planar LiDAR to implement Simultaneous Localization and Mapping (SLAM), in a team of 3

Variants on a Bomberman AI

Jan 2024 – Mar 2024

- Designed multiple variants of an AI to play the classic NES game, Bomberman
- Used both adversarial search and reinforcement learning, including Expecti-minimax and Approximate Q-Learning

Brigham and Women's Hospital Kiosk Application

Mar 2023 – May 2023

- Led a team of 11 to create a hospital kiosk application, allowing for pathfinding, submitting work orders, and customizing signage
- Utilized Figma to create and iterate on front-end UI mockups before implementing in JavaFX
- Implemented Façade, Singleton, and other design patterns for clean integration with the backend SQL Database

TECHNICAL SKILLS

Languages	Python, TypeScript, C#, Java, JavaScript, C++, C, MATLAB
Frameworks	React.js, Arduino, MicroPython, IsaacSim, Unity Game Engine, .NET, Simulink
Version Control	Git, Kanban, Agile, Github Projects, Azure DevOps, Jira
Other	Nvidia Omniverse, Blender, Autodesk Inventor, Figma, Raspberry Pi, Microsoft Office

EXTRACURRICULARS

WPI Cooking Club, President

Apr 2023 - Present

WPI Robotics Prototyping Club, Founder, Treasurer

Aug 2024 - Present

WPI Rho Beta Epsilon, Alpha Chapter

Feb 2025 - Present

WPI Bowling Club, Treasurer

Aug 2022 – Feb 2023

WPI VexU, Software Co-Lead

Aug 2022 – Feb 2023

Scouting America, Troop 106, Eagle Scout

Mar 2014 – July 2021