Kevin Siegall (They/Them)

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EDUCATION

Worcester Polytechnic Institute **May 2025**
B. S. Computer Science; B. S. Robotics Engineering *Worcester, MA*
- Relevant Classes: *Software Engineering, Unified Robotics Series: Actuation, Sensors, Manipulation, Navigation*

WORK EXPERIENCE

OpenSTEM: Experiential Robotics Platform (XRP) **Aug 2022 – Present**
Lead Software Developer, Curriculum Author *Worcester, MA*
- Spearheaded the development of an extensible MicroPython library built for classroom use with small robots.
  - Created a web socket server for remote control of the robot
  - Implemented I2C communication with the LSM6 IMU
- More details about the project can be found at http://experientialrobotics.org

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 filters to be applied to the DAFIF database
- Exercised object-oriented techniques such as dependency injection and encapsulation in C#

PROJECTS

Robotic Pick-And-Place Sorting System **Aug – Oct 2023**
- Controlled the OpenManipulator-X 4dof robot arm using MATLAB and the Dynamixel SDK for WPI's RBE 3001 Class
- Utilized MATLAB's Image Processing and Computer Vision Toolboxes to isolate objects in the robot's workspace.
- Derived position and velocity kinematics solutions, which allowed us to use quintic trajectory interpolation to sort targets by color.

Brigham and Woman's Hospital Application **Mar – May 2023**
Lead Software Engineer *Worcester, MA*
- Made a hospital kiosk application, allowing for pathfinding, submitting work orders, and customizing signage.
- Led a team of 11 in developing a full Java application for WPI's CS 3733 Software Engineering Class
- Utilized Figma to create and iterated on Front-End UI Mockups before implementing in JavaFX
- Implemented Façade, Singleton, and other design patterns for clean integration with the backend SQL Database

WPI Vex U, Software Team **Sept 2021 – May 2023**
- Developed a python application for Bezier spline creation and robot simulation
- Applied control algorithms such as Inverse Kinematics, PID, and TBH (Take Back Half) Control
- Designed a modular codebase for controlling the individual movements of our two different robots

WPI IGDA Game Jam Submissions **Fall 2022 - Present**
- Howline Maine – A top-down precision speed game where a werewolf hunts park rangers, inspired by Hotline Miami
- Cosplay Conundrum – An isometric multiplayer party game taking place in a convention.

TECHNICAL SKILLS

Languages	Java, C#, Python, C++, C, MATLAB, TypeScript
Frameworks	Arduino, MicroPython, .NET, Simulink, Unity Game Engine
Version Control	Git, Github Projects, Azure DevOps, Jira
Other	Autodesk Inventor, Figma, OpenMV, Raspberry Pi, FPGA, MathCAD, Microsoft Office

EXTRACURRICULARS

WPI Cooking Club, President **April 2023 - Present**
WPI Bowling Club, Treasurer **Aug 2022 – Feb 2023**
WPI VexU, Software Co-Lead **Aug 2022 – Feb 2023**
WPI International Game Developers Association (IGDA) **Aug 2022 – Present**
WPI Hillel **Aug 2021 – Present**
Boy Scouts of America, Troop 106, Eagle Scout **Mar 2014 – July 2021**