

Bryce Martis

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Education

Worcester Polytechnic Institute | Worcester, MA

May 2028 expected

B.S. candidate, Robotics Engineering | GPA: 3.95/4.0

Minor: Electrical and Computer Engineering | Concentration: Signal Processing

Honors: Dean's List; Presidential Scholarship; Florence Evans Bushee Foundation Scholarship; Charles O. Thompson Scholar

Relevant coursework: Robotics Embedded Systems; Mechanical Applications in Robotics; Control Engineering I; Sensing and Perception in Robotics; Manipulation in Robotics; Systems Programming with C

Technical Skills

Programming: C++, C, C#, Python, MATLAB, Java, Unreal Engine Blueprints; OpenCV

Robotics and hardware: SolidWorks, embedded systems, microcontrollers, FDM 3D printing, ESP32, Raspberry Pi, A4988 stepper drivers, servo control, PID control systems

Tools + Platforms: Unreal Engine 5, Unity 6.3, Blender, Linux (Debian/Ubuntu), Windows, Node.js, Three.js, Git, Git LFS

Technical Experience

XR Specialist | The Global Lab at WPI

Spring 2026–Present

- Built a Meta Quest study-abroad experience in Unreal Engine 5, used by WPI students, the provost, and admissions; implemented local 360° video loading and transitions and location-map-based site selection interface.
- Built a Node.js/Three.js spectator client so people outside the headset can observe the VR user's activity.
- Extended a Worcester digital twin used by city officials with urban heat and heat-vulnerable building visualizations, model insertion/manipulation tools, and a tablet-style UI; upgraded UI/XR systems to Unity 6.3.

Volunteer Research Assistant | WPI AVMI

Sep 2026–Present

- Support research integrating simulated LiDAR and camera data with real-world sensor data for real-time autonomous robotic systems.

Robotics Projects

Three Degree of Freedom Robotic Arm

2026–Present

- Designed and built a 3D-printed arm in SolidWorks with base-mounted NEMA 17 motors, spur gears, and dual four-bar linkages; designed the mechanism to concentrate mass near the body and manage end-effector torque demands.
- Assembled custom power and motor-driver circuitry using A4988 breakout boards and soldered protoboard wiring.
- Implemented C/C++ inverse kinematics and motion control on ESP32-WROOM; the physical arm executes XYZ target sequences. In progress; designed for a future rover platform.

Face Tracking Social Robot

2024

- Individually designed and built a battery-powered robot with seven microservos and compact eye/mouth linkages; integrated Python/C and OpenCV face tracking on Raspberry Pi 5 with Pico servo control over USB serial, plus gamepad expressions.

Software Project

Uploaded | Solo Multiplayer Game Developer

2019–2020

- Solo-developed and released a Steam game using Unreal Engine 4 and C++; implemented multiplayer netcode and replication, with SmoothSync for player translation; created art, audio, and 3D assets.
<https://store.steampowered.com/app/1374630/Uploaded/>

Leadership and Additional Experience

Community Advisor | WPI Insight Program

Aug 2025–Present

- Mentor first-year cohorts of 11 and 40 students across two years; provide individual support and presentations on time management, social adjustment, and transitioning to college life.

Employee | The Cottage

Jun 2023–Jul 2026

- Trained coworkers, opened and closed shop, and independently closed registers, logged shift earnings, and handled cash deposits.

Programming and Robotics TA | Triton Regional High School

Sep 2023–May 2024

- Supported C++ and VEX robotics instruction for approximately 20 students through one-on-one explanations and classroom teaching.