Joseph Grossman
Robotics Engineer

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Education

Tufts University — **Medford, MA**
MS Computer Science in Human-Robot Interaction — **Graduated February 2026**
Affiliated with the Assistant Agent Behavior and Learning (AABL) Lab | GPA: 3.77
Coursework: Robotics, Intro to Machine Learning, Probabilistic Robotics, Probabilistic Systems Analysis, Goal & Path Recognition Seminar

Purdue University — **West Lafayette, IN**
BS in Robotics Engineering | Minor in Computer Science — **Graduated May 2024**
Presidential Scholar | Dean's List | Honors College | GPA: 3.47
Coursework: Advanced Industrial Robotics, Automated Manufacturing Processes, Machine Learning & Manufacturing Analytics, Applied Computer Vision, Data Structures & Algorithms, Industrial Controls

Skills and Interests

Programming: Python, C, C++, Java, JavaScript, MATLAB, ROS, Ladder Logic, Arduino, PLC, Algorithms, Git
Robotics/Engineering: Robot Kinematics/Dynamics, RViz, Computer Vision, Electrical & Mechanical Design, PID Control, Machine Learning, Plan & Goal Recognition Algorithms, CAD, GD&T, Mechanical & Wiring Diagrams, Teach Pendant Programming
Tools: AutoCAD, AutoCAD Electrical, Autodesk Software, Linux, MS Excel, PowerPoint, Word
Interests: Tabletop and Trading Card Games, Fighting Games, Soccer, Cooking

Projects

Freight Robot Navigator – Utilized ROS, RViz, and the Navigation Stack to program a Freight Robot to navigate an environment while performing obstacle avoidance.
Fetch Navigation Robot – Building upon the above project, utilized ROS Bridge, armpy, and speech recognition libraries to create a navigation interaction.
Smartwatch Robotic Arm Controller – Programmed a robotic arm controlled over the internet by a smartwatch.
Sphero Swarm Localization – Used computer vision techniques and probabilistic path planning to localize and control a swarm of Sphero robots.
Trading Card Analyzer – Built computer vision system for automated condition grading of Trading Cards.

Experience

Photon Automation Inc. — **Greenfield, IN**
Controls Engineering Intern — **May 2023 – August 2023**
- Updated electrical drawings based on modifications made on the shop floor. Worked with different departments to make sure updates were made correctly.
- Created and updated electrical diagrams based on existing machines and researched components that could be used to accomplish the customer's requests.
- Researched programming and hardware components that could be used to integrate a laser welding head into the in-house built laser cutter.

Positive Exposure (Nonprofit) — **New York, NY**
Summer Intern — **June 2019 – August 2020**
- Provided technical support to program directors when technical difficulties arose.

Leadership and Community Involvement

Bechtel Innovation Design Center — **West Lafayette, IN**
Volunteer Peer Mentor — **July 2021 – May 2024**
- Instructed students working on personal projects on the proper use of machines in the woodshop.
- Built a controller for use in fighting games as a personal project.

Special Olympics New York City — **New York, NY**
Coach: Bowling (Fall), Basketball (Winter), Track & Field (Spring), Softball (Summer) — **2011 - 2019**
- Coached athletes ages 12 – 70+ with intellectual and developmental disabilities in various sports.
- Provided program heads with technical support and administrative assistance.
- Managed groups of volunteers by delegating tasks and assigning each to groups of athletes.