

**Sebastian Baldini**

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**Objective:** I am a Robotics Engineering Major and Computer Science minor student looking for a summer engineering internship position.

## Education:

Worcester Polytechnic Institute (WPI), Worcester, MA

Bachelor of Science in Robotics Engineering, GPA 3.5 Graduating May 2025

## Activities/Leadership:

**WPI Robotics Materials Group:** August 2023 -> Present:

- Designing custom encoding solution with conductive filaments to replace magnets in soft body multi-material 3d printed quadrupedal robots
- Assessing the strength and quality of new multi-material FDM printers for soft robotic applications

**Omega Head of House, MBU Exec Chair:** APO Omicron Iota Chapter: January 2023 -> Present

- Lead the organization of WPI's Merit Badge University with over 100 Boy Scouts coming to campus to earn merit badges.

**Lead Test Stand and Control Systems Designer:** AIAA Jet Engine Project: March 2023 -> Present

- Leading development of new control system for Wren 75 Jet Engine
- Developing remote server data display and collection system for new test stand

## Personal Projects:

**Brushless Motor ESC Design:**

- Designed a brushless motor ESC on a breadboard with custom Arduino code with a classmate

**OpenCV Personal Project:**

- Developing a face recognition model to identify over 30 individuals accurately with Haar Cascades
  - Currently upgrading the system to use YOLOv8, an open source CV neural network
- Integrating this system with a motion system to have the camera rotate and tilt to keep faces in frame
  - Starting development to apply basic object permanence between frames from video

**3 Lbs BattleBot**

- Designed a robot to move using gyroscopic precession instead of traditional locomotion to compete in NHRL

## Experience:

**Millennium/Evergreen Slate: Intern Production Manager,** Granville NY: May 2022 -> August 2022

- Managed the loading and unloading of production lines involving CNC lasers and FANUC robotic systems
- Diagnosed and repaired bugs in code and sensor issues to improve the efficiency and uptime of production

**Skills:**

- Technical Skills: Circuits and Sensor Integration and Programming, C++, Java, Rust, Python, MATLAB
- Software: Solidworks (CSWA certified), Fusion 360, Onshape, Simulink, MultiSim, Linux, ABB RobotStudio

**Additional Related Courses:** CS 4341: Introduction to Artificial Intelligence, RBE 4815 Industrial Robotics