Seth Robles

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Education

Massachusetts Institute of Technology (MIT) — GPA 4.9/5.0 **Expected May 2027**
BS in Mechanical Engineering, Minor in Computer Science *Cambridge, MA*

- **Coursework**: Circuits, Robotic Manipulation, Design and Manufacturing, Intro to Robotics, Dynamics and Controls II
- **Extracurriculars**: MITERS (MIT Electronic Research Society), Camp Kesem, Admissions Ambassador, Zeta Psi Fraternity, Associate Advisor, Society of Hispanic Engineers

Experience

Fabrication-Integrated Design Lab **June 2025 – Aug. 2025**
Mechanical Engineering Research Intern *Cambridge, MA*

- Tested suction cup arrays to determine array strength-and-failure curves
- Designed and prototyped a tracked suction tank system for terrain-adaptive movement

MIT Olsen Lab Research **Feb. 2024 – Sep. 2024**
Undergraduate Researcher *Cambridge, MA*

- Designed machine parts around chemistry safety requirements while maintaining mechanical speed and precision required for ideal chemical solutions
- Modeled a functioning cyclone separator in Fusion CAD and set up simulations in Ansys CFD Software to create accurate models for future simulations

Projects

AccessPoint **January 2025 – July 2025**
Founder and Developer *Remote*

- Created a centralized platform to connect BIPOC, LGBTQ+, and first-gen students with vetted scholarships and educational opportunities
- Built and maintained full-stack web app using Flask and PostgreSQL; integrated LangChain and Gemini APIs to enable AI-powered search
- Sunset the platform after testing revealed limited long-term impact, applying lessons to future ventures

2.12 Robotics **Feb. 2025– Present**
UR5 Team Lead *Cambridge, MA*

- Led a team of 7 upper-level undergraduate and graduate students in using a UR5 for pick and place tasks with deformed plastic bottles
- Prototyped potential end effectors in solidworks before 3D printing them for testing
- Used PlatformIO with VSCode for computer vision, allowing for automation of pick and place tasks based on bottle colors

Skills

Languages: Spanish, Italian (Basic), ASL (Basic)
C.S. and Electronics: Python, Java, HTML, CSS, C++, Raspberry Pi, Arduino, ESP32, NodeJS, Electron
Modeling Software: Solidworks, Autodesk Fusion CAD, Ansys Fluent Flow CFD Modeling, KiCAD (Beginner)
Machining and Fabrication: Lathe, Mill, CNC Router, Laser cutting, Soldering, 3D Printing

Teaching and Leadership

Physics Instructor **Jan. 2025**
Instructor *Pordenone, Italy*

- Taught fundamental physics (mechanics, heat transfer, electricity, and magnetism) to students through interactive lessons and hands-on demonstrations
- Designed and implemented engaging problem-solving activities to reinforce key principles
- Adapted teaching methods to accommodate diverse learning styles in an international setting

Awards

Gates Scholar, Jack Kent Cooke Scholar, National Merit Scholar, Questbridge Scholar, Hispanic Scholarship Fund Scholar, Coolidge Senator, National Hispanic Recognition Scholar, Small Town Recognition Scholar, 3x AP Scholar with Distinction

Interests

Sports, Writing, Robotics and Automation, Wearable Technologies