

Asa Paparo

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Education

Massachusetts Institute of Technology

Cambridge, MA

Candidate for Bachelor's Degree in Computer Science

8/2024 – Present

- Member of the MIT Motorsports FSAE team

The Bronx High School of Science

Bronx, NY

Advanced Regents Diploma

8/2020 – 6/2024

- 4.0 GPA
- Completed courses in linear algebra, multivariable calculus, mechanics, and electricity & magnetism

Experience

MIT Marine Autonomy Lab

Cambridge, MA

Undergraduate Researcher

9/2024 – Present

- Develop open source interfaces and device drivers for GPS, doppler velocity log, and acoustic modem sensors
- Integrate sensor components with MOOS-IvP framework to support lab research

Charles Stark Draper Laboratory

Cambridge, MA

Autonomous Systems Intern

6/2024 – 8/2024

- Developed software for control and simulation of a fully autonomous rover with ROS2 and Gazebo
- Collaborated with engineering team of 7 interns to budget, plan, and implement solution to design challenge

Beaver Works Summer Institute

Cambridge, MA

Autonomous RACECAR Competitor

7/2023 – 7/2023

- Implemented real time autonomous control of small vehicle with ackermann steering
- Researched particle filtering based SLAM and autonomous navigation using LIDAR and IMU sensors

SciBorgs Robotics Team

Bronx, NY

Head of Software

5/2023 – 6/2024

- Led software team of 10+ people in development and integration of robot software
- Taught new members programming, version control, software development practices, calculus, and control theory

Programmer

11/2021 – 6/2024

- Contributed to upstream development of critical libraries utilized by teams, including WPILib
- Employed control theory, path following, and localization to achieve autonomy in competition

Bronx Science Journalism/Yearbook

Bronx, NY

Student Director of IT

9/2022 – 6/2024

- Maintained a production LAMP server utilizing bash, Ubuntu, Systemd, Apache, PHP, and Podman
- Published articles for the school newspaper and yearbook

NYC FIRST

NY

Volunteer

11/2022 – 12/2023

- Taught foundational programming and robotics knowledge to middle school and high school students
- Mentored the students to engage in a STEM design process
- Volunteered at local competitions, including as a referee

Awards

Dean's List Finalist – FIRST Robotics

4/2023

Disruptive Engineering Award – Beaver Works Summer Institute

7/2023

Skills

Programming: C++, Rust, Python, Java, Bash, C#, JS, TS, PHP

Robotics: ROS2, Gazebo, Nav2, MOOS-IvP, OpenCV, AprilTags

Tools: Fedora, Ubuntu, Systemd, Helix, **typst**, L^AT_EX, Apache, Podman, Docker, Git, GitHub