

Asa Paparo

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I'm an incoming freshman at MIT interested in physics, computer science, robotics, control theory, osdev, and more.

Education

The Bronx High School of Science

Graduated 6/2024

- 4.0 GPA
- Completed Linear Algebra and Multivariable Calculus accredited at UAlbany
- Scored 5 on AP World History, AP Computer Science, AP Calculus BC, AP Physics 1, and AP Physics C: Mechanics

Awards & Recognition

- Beaver Works Summer Institute, Dr. Bob Disruptive Engineering Award, Summer 2024
- FIRST Robotics, Dean's List Finalist, Spring 2023

Experience

Charles Stark Draper Laboratory 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 Autonomous RACECAR Competitor 7/2023 - 8/2023

- Led and supported 3 person team to honorable mention in the Grand Prix
- Rewrote part of the course's core library to improve efficiency for all competing and future teams
- Researched particle filtering based SLAM and autonomous navigation using LIDAR and IMU

SciBorgs Robotics Team (FRC 1155) 11/2021 - 6/2024

Head of Programming 5/2023 - 6/2024

- Led software team of 10+ people in development and integration of software for manual and autonomous robot control
- Taught rookier members Java, software development, linear algebra, calculus, and control theory

Programmer 11/2021 - 6/2024

- Maintained robotics codebases with a team using Java, WPILib, Git, and GitHub
- Rebuilt generational knowledge from the ground up after COVID
- Employed intermediate control theory, path following, and localization to achieve autonomy in competition

Mentor 11/2022 - 12/2023

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

Bronx Science Journalism/Yearbook Program 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

Skills

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

Robotics: ROS2, Gazebo, ros2_control, Nav2, Drake, OpenCV, AprilTags

Tools: Fedora, Ubuntu, Systemd, Helix, Apache, Podman, Docker, Git, GitHub