

Paolo Maselli

Harrington Park, NJ | 201-421-5725 | maselli0916@gmail.com

paolomaselli.com | linkedin.com/in/paolo-maselli-760587169

Objective

Mechanical engineering student at Columbia University seeking aerospace internship opportunities meaningfully contributing to development of spaceflight systems and hardware.

Education

Columbia University (Fu Foundation School of Engineering and Applied Science) Fall 2024 - present

Major: B.S. Mechanical Engineering | Minor: Aerospace Engineering | Intended Graduation: 2027 | Cumulative GPA: 3.5

Stevens Institute of Technology Fall 2023 - Spring 2024

Major: B.S. Mechanical Engineering | Transferred after two semesters | Cumulative GPA: 3.9

Experience

Columbia Space Initiative Rocketry Team | Club Member Fall 2024 - present

- Continuing work on a team designing and building a hybrid propulsion system for a rocket with target altitude of over 50,000 feet.
- Leading a team as a responsible fluids engineer developing a liquid oxygen disconnect valve, critical to the 2025/26 vehicle.
- Designed and manufactured a nitrogen quick disconnect on the 2024/25 vehicle. Contributed to GN2 system architecture.
- Launched 2024/25 rocket with all contributions functioning as intended. First student lead team in the United States to launch a LOX-Hybrid system.

Ball Corporation | Manufacturing Management Intern Summer 2025

- Streamlined and standardized data analysis of performance indicators, optimizing plant efficiency.
- Changed how team members interacted with data, approved by management and corporate executives.
- Gained experience with efficient and safe manufacturing at a Fortune 500 company.
- Learned and applied skills in data science and industrial engineering.

Projects

High Pressure Nitrogen Quick Disconnect | Project Owner Fall 2024 - Spring 2025

- Developed, simulated, manufactured, and tested a nitrogen quick disconnect system rated to over 4,000 PSI.
- Conducted extensive research into material properties, seals, pressure and stresses, available resources, and external designs.
- Used CAD software to model and iterate on several designs. Conducted formal design reviews before selecting a final version.
- Machined a tightly toleranced final product using a CNC lathe and mill. Tested part to verify functionality before approving for use during launch operations.
- Successfully allowed flow of GN2 into the vehicle, disconnected, and re-sealed following launch, resulting in a nominal flight.

Autonomous Robot | Lead Designer Spring 2024

- Designed and assembled an autonomous robot capable of traversing a course independently.
- Modeled and tested several prototypes before selecting a final chassis. Optimized for performance and stability.
- Programmed pathfinding logic in Arduino using a provided LIDAR map for target acquisition and movement, and a separate obstacle avoidance loop to ensure no crashes or slowdowns.
- Completed an initial obstacle course with no difficulty, demonstrating effectiveness of code and design. Was invited to compete at the Stevens Institute of Technology Autonomous Robot Competition.

Low Powered Rocketry | Personal Project Spring 2024

- Modeled, constructed, and tested an amateur scale rocket and gained valuable engineering experience.
- Designed and simulated structural and aerodynamic parts to be almost entirely 3D printed, minimizing off the shelf parts while remaining robust and stable in flight, as dictated by simulation software.
- Utilized avionics to both store flight data, as well as to control the ejection of parachutes based of altitude and velocity.

Technical Skills

- CAD, FEA, CFD, Design & Simulation: *Solidworks, Fusion 360, Ansys Workbench, Open Rocket.*
- Software and Programming: *Python, MATLAB, Arduino, Excel.*
- Manufacturing: *CNC machining, GD&T, 3D printing, and general machine shop proficiency.*