

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 job opportunities.

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: 3.6

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

- Responsible fluids engineer on a team designing and building a rocket with a liquid bi-propellant propulsion system.
- Led team that developed a liquid oxygen feed system on the 25/26 vehicle including custom check valve, cryogenic disconnect.
- Designed and manufactured a nitrogen quick disconnect on the 2024/25 vehicle. Contributed to GN2 system architecture.
- Launched 2024/25 rocket with all contributions fully functional. First student lead team in the United States to launch a LOX-Hybrid system.

STS Aerospace | Mechanical Engineering Intern June – August 2026

- Designing custom tools and fixtures for aerospace manufacturing to improve production efficiency and eliminating waste.
- Implementing procedures for best use of robotic automation to maximize available machine time.
- Collaborating across engineering and manufacturing teams to streamline production workflow and strengthen documentation.

Ball Corporation | Manufacturing Management Intern Summer 2025

- Streamlined and standardized data analysis of performance indicators, changes approved by management and executives.
- Learned and applied skills in data science and industrial engineering at a Fortune 500 company.

Projects (expanded portfolio accessible at paolomaselli.com)

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

- Designed, manufactured, and flight validated a nitrogen quick disconnect system rated to over 4,000 PSI.
- Used CAD software to model complex designs. Iterated on several versions. Conducted formal design reviews before selecting final part.
- Machined a tightly toleranced final product using a CNC lathe and mill. Tested part to verify functionality before use during launch operations.
- Successfully allowed flow of GN2 into the vehicle, disconnected, and re-sealed following launch, resulting in a nominal flight.

Liquid Oxygen Feed Line | Responsible Engineer Fall 2025 – Spring 2026

- Led a team that developed, fabricated, and rigorously tested a liquid oxygen feed line.
- Conducted extensive research into material properties, seals, pressure and stresses, available resources, and other designs.
- Led design of cryogenic rated custom valves, including a check valve, automatic fill valve, and quick disconnect system.
- Expanded on prior machining experience, manufacturing precision, LOX-safe parts from steel.
- Verified design functionality via extensive testing. All parts in the fill line functioned completely.

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.

Technical Skills

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