

Atharva Atul Aloni

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Profile

Mechanical Engineering undergraduate (Honors in Systems Engineering) with strong interest in aerospace, aerostructures, and advanced technologies including Machine Learning and Artificial Intelligence. Focused on integrating modern computational and data-driven tools into mechanical engineering applications.

Education

Pimpri Chinchwad College of Engineering, Pune 2023 – 2027
B.Tech in Mechanical Engineering (Honors in Systems Engineering), CGPA: 7.5

Dr. D. Y. Patil College of Science and Commerce 2021 – 2023
HSC — 73.4% — SSC — 86.2% — MHT-CET — 97 Percentile

Experience

Director of Design and Aerodynamics Oct 2024 – Present
Team Anantam Rocketry and Space Research

- Led the design domain and coordinated multiple subsystems across propulsion, structures, and recovery.
- Defined aerodynamic design strategies, analysis workflows, and validation standards.

Data Analyst and Researcher Aug 2024 – Sept 2025
Concept Simplified

- Worked as a data and strategy consultant for an education-focused advisory platform.
- Developed a Python-based college predictor tool to streamline student admissions.
- Analyzed platform performance, user engagement, and content reach using data-driven methods.
- Contributed to approximately 60% growth in overall platform reach while supporting the expansion of the YouTube channel to 100K+ subscribers.

Intern June 2024 – July 2024
GAPS Energy

- Supported machine setup, calibration, and manufacturing operations.
- Worked closely on the design and development of ESP systems.

Projects

Blue Butcher Rocket Series

- Designed and manufactured three model rockets with apogees of 115 m, 300 m, and 500 m.

Red Titan High-Power Rocket

- Designed and developed a high-powered rocket (1 km apogee) with AQI payload and live data transmission involving complex subsystem integration.

Airavat Thrust Stand

- Built a thrust stand capable of measuring thrust of high-powered solid rocket motors.

Machine Vision Quality Inspection System

- Programmed the backend of a machine vision system to inspect print position and quality on medical equipment and compute distance from datum points.

Skills

CAD & Design: SolidWorks, CATIA

Simulation & Analysis: ANSYS (FEA, CFD Fundamentals), Simulink, OpenFoam

Systems Engineering: CATIA No Magic (CAMEO), MBSE Concepts, SysML

Programming & ML: Python, MATLAB, Machine Learning, OpenCV, scikit-learn

Languages: English, Hindi, Marathi