Ashima Puri

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Portfolio: https://cornell-mae-ug.github.io/fa25-portfolio-ap4224/
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EDUCATION

Cornell University, College of Engineering, Ithaca, NY **Aug 2024 - May 2028**
Bachelor of Science, Mechanical Engineering, Engineering GPA: 3.2
Relevant Courses: Statics and Mechanics of Solids, Dynamics, Mechanical Design, Thermodynamics, Electromagnetism, Mechanics & Heat, Computing, Introduction to Mechanical Engineering, Differential Equations, Multivariable Calculus, Calculus, General Chemistry

PROJECT EXPERIENCE

Cornell Mars Rover Project Team, *Drivetrain Subteam Member* **Jan 2025-Present**

- Redesigned rover wheels in Autodesk Inventor, including developing wheel treads to improve traction and avoid stress concentration, increasing climb performance by 20%
- 3D-printed and tested multiple wheel prototypes to test for effective traversal across rocky Mars-simulated terrain and ability to avoid and climb out of holes
- Fabricated 20+ drivetrain components to fully integrate with suspension and mobility subsystems

Circle K at Cornell University, *Fundraising Chair* **Nov 2024-Present**

- Led a team of 20 undergraduates in a week-long fundraiser to support the Sophie Fund, including raising $200 through 10 hours of cake pop sales
- Managed event logistics, budgeting, marketing, task delegation to lead successful fundraisers for multiple charities and group needs

GE Aerospace, *Explore Engineering Participant* **June 2025**

- Analyzed diverse energy sources for propulsion systems, including cost, energy density, storage requirements, and how they impact design decisions
- Conducted detailed research on bypass and compression ratios and their impact on turbofan engine design, including fan diameter, noise, and material limitations

RESEARCH EXPERIENCE

Student Spaceflight Experiments Program, *Co-Founder & Assistant Community Director*
June 2021-June 2024

- Designed experimental hardware such as test tubes, containment system, and fluid transport setups to ensure astronauts on the International Space Station could safely conduct an experiment furthering space agriculture which studied the effects of microgravity conditions on nematodes
- Mentored 15 student research teams in developing proposals for experiments performed under microgravity conditions on the International Space Station in partnership with NASA

SPECIALIZED SKILLS & CERTIFICATIONS

Skills: CAD (Autodesk Inventor, Autodesk Fusion 360, CREO, Siemens NX, Solidworks, AutoCAD); ANSYS; ROS; Arduino; Python; MATLAB; Java; C++; Microsoft Suite; Machining (3D Printer, Hand Tools, Power Tools, Soldering, Drill Press, Laser Cutter, Welding); Electromagnetism (RF systems, Circuits); Lab View; Confluence; Teams
Certifications: Kumon Math Program Graduate, “PredictionX: Lost Without Longitude” from HarvardX, International Baccalaureate Program, Air Force ROTC Type 1 Scholarship
Languages: Hindi (Seal of Biliteracy), Spanish (Seal of Biliteracy)