Deepti Kousik

802-433-3784 | djk298@cornell.edu | Dallas, TX | LinkedIn

EDUCATION

Cornell University - College of Engineering Class of 2027

- B.S. in Mechanical Engineering
  Relevant Coursework: Introductory Fluid Mechanics*, Thermodynamics*, Dynamics, Statics & Mechanics, Linear Algebra*, Differential Equations**,** Physics: Mechanics & Heat**,** Physics: Electrostatics & Magnetism
  **Currently taking in Fall 2025*

EXPERIENCE

Cornell Rocketry Oct. 2024 - Present
Propulsion Subteam Lead

- Work with a team of 40+ students to design, build, test, and launch a hybrid rocket to 10,000 feet at the International Rocketry Engineering Competition (IREC) while developing a liquid rocket engine.
- Solely own, design, assemble, and implement all fluid systems for a liquid Nitrous Oxide/Ethanol engine.
- Fabricate parts using computer aided machining with CNC lathes, mills, and more as a certified machinist.
- Manage logistics, system coordination, and timelines for 2026 hybrid and liquid engine campaigns.
- Lead design, integration, and pressure testing of fill station and hybrid rocket propulsion systems, including a custom mechanically actuated valve and quick-disconnect for nitrous oxide fueling.
- Optimized an injector for a liquid Nitrous Oxide and Ethanol thrust chamber assembly through iterative CAD modeling and Ansys static structural analysis; accounted for additive manufacturing constraints.

NASA L'Space Proposal Writing and Evaluation Experience Academy Jan. 2025 – May 2025
Team Scientist

- Researched CubeSat-based payload transfer methods using microthrusters for precise orbital maneuverings.
- Developed a technical project proposal in collaboration with NASA mentors and student team.

NASA High School Aerospace Scholars (HAS)
Intern - HAS Mentor Aug. 2023 – June 2024

- Coordinated with NASA professionals to assist students and design curriculum for the program.
- Planned and implemented engineering design challenges and supported engagement events.

Student/Team Systems Engineer Aug. 2022 – June 2023

- Presented research on lunar south pole exploration and CAD of potential spacesuits to NASA consultants.

EXTRACURRICULARS

Society of Women Engineers Sep. 2024 - Present
Elementary Outreach Committee

- Collaborate with volunteers to teach children engineering through hands-on projects at elementary schools.
- Coordinate with local elementary schools to expand SWENext K-12 initiatives.

Cornell Engineering Admissions Ambassadors Sep. 2025 - Present
Ambassador

- Plan events hosting prospective and admitted students, lead tours, and answer questions.

TECHNICAL SKILLS

- *CAD & Simulation:* Solidworks, Fusion, ANSYS, Computational Fluid Dynamics
- *Manufacturing:* Computer Aided Machining, CNC Machining, Manual Mills and Lathes
- *Programming Languages:* Java, Python, HTML, MATLAB, R
- *Other:* 3D Printing, Prototyping, Piping & Instrumentation Diagrams