ADARSH RAJPUT

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EDUCATION

B.Tech. Aerospace Engineering Graduating May 2026
VIT Bhopal University, Sehore, MP 8.44 CGPA

Relevant coursework: Fluid mechanics, Aerospace Structures, Aerodynamics

TECHNICAL SKILLS

Design & Modeling Tools: Fusion 360, Simscale,
Programming: Python, MATLAB
Tools & Productivity: Microsoft office
Certifications: NPTEL Aircraft Design (April 2024), Overview of Space Science and Technology ISRO START (August 2023), NPTEL Computational Fluid Dynamics (May 2025)

WORK EXPERIENCE

AEROGO INDIA, Bangalore: April 2024

- Attended a 2-day workshop by Aerogo India on RC Plane Design and Fabrication and gained hands-on experience in **RC vehicle design, assembly, and operation**.
- Learned **principles of flight** and their application in real-world RC aircraft.
- Independently built and flight-tested an **RC aircraft using workshop-acquired skills.**

ACADEMIC PROJECTS

Infrared Signature Suppression System for Helicopters Winter 2024
Collaborated in a team of three to design model of Mi-17 helicopter (Fusion 360).

- Developed team schedule, including quality measurement for each major milestone.
- Designed and analyzed a **spectrally selective solar absorber and thermal infrared suppression system** using **hollow cylindrical microstructures**.
- Modeled a thermal IR suppression system for **the Mi-17 V5 using Fusion 360** and **meshed over 500,000 elements** for thermal FEA.
- **Researched and compared** IR countermeasure techniques, evaluating **6 existing technologies**, including **film-cooled tailpipes and black hole occluders (BHO)**.

Self-Balancing gyroscopic cycle Fall 2024
worked in a team of 9 to design and develop a self-balancing cycle.

- Designed a fully detailed 3D model of a self-balancing gyroscopic cycle, incorporating **key components such as structural frame, wheels, handlebar, and chain sprocket system. (Fusion 360)**
- Applied advanced CAD methodologies to optimize structural balance, mass distribution, and aesthetic coherence in the prototype design.
- Conducted component-level **finite element analysis (FEA) for stress evaluation** and structural integrity validation.
- Led CAD modeling of chassis and drivetrain assembly using Fusion 360; validated design with component-level FEA.

ACTIVITIES

- Participated in the Pre-Conference Workshop on Gas Turbine Technologies as part of the International Conference on Aerospace Sustainable Technologies and Innovations (ICSATI 2025)
- Presented a technical poster during the same conference