

Rageesh Patel

Mechanical Engineering Undergraduate
Maulana Azad National Institute of Technology, Bhopal
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EDUCATION

•**Maulana Azad National Institute of Technology, Bhopal** 2024 – 2028
Bachelor of Technology in Mechanical Engineering CGPA: 9.05

•**Kendriya Vidyalaya, Chitrakoot** 2023 – 2024
Senior Secondary (CBSE) Percentage: 98.2%

EXPERIENCE AND PROJECTS

•**VyomGarud UAV Solutions Pvt. Ltd.** 2024 – Present
Mechanical Designer & Product Developer Bhopal

- Designed and developed mechanical systems for Autonomous Mobile Robots (AMRs), robotic arms, and UAV platforms using CAD modelling and rapid prototyping.
- Worked in R&D to develop manufacturable CAD models and prototypes using additive manufacturing techniques.
- Developed and simulated designs of different Unmanned Aerial Vehicle (UAV) frames, mountings, and Vertical Take Off and Landing (VTOL) UAVs for medical logistics applications.

•**MANIT Bus Tracker** 2025
Collaborative R&D Project

- Developed a real-time bus tracking solution using ESP32, GPS, LoRa communication, and cloud-based monitoring.
- Improved operational visibility through data collection and tracking dashboards for end users.

•**ISAM Student Design Competition** 2025
National Level Project

- Designed and fabricated lightweight jute-epoxy composite panels for sustainable engineering materials.
- Performed CAD modelling, structural simulation, and mechanical testing to evaluate strength and performance.

•**Hindustan Aeronautics Limited (HAL)** 2026
Mechanical Engineering Intern Hyderabad

- Studied aerospace product development from conceptual design to manufacturing, assembly, testing, and validation.
- Gained exposure to aircraft fly-by-wire systems, missile Inertial Navigation Systems (INS), aerospace sensors.
- Learned CNC machining & programming, EDM, , industrial automation, and precision component manufacturing.
- Developed understanding of Design for Manufacturing (DFM), engineering drawings, Metrology, quality standards.

TECHNICAL SKILLS

CAD & Product Design: Fusion 360, SolidWorks, CAD Modelling, Engineering Drawings, GD&T, Design for Manufacturing (DFM), Design For Manufacturing(DFA)

Simulation & Analysis: Structural Analysis (ANSYS), Mechanical Simulation(OpenFoam), Aerodynamic Simulation(Solidworks cfd, SimScale),FEA

Manufacturing: CNC Programming, MasterCAM, EDM, Additive Manufacturing (3D Printing), Punch presses

Robotics & Embedded Systems: Autonomous Mobile Robots (AMRs), UAV Systems, ESP32, Arduino, Pixhawk

Programming: C, Python

Engineering: Research & Development (R&D), Experimental Validation, Measurement & Testing, Rapid Prototyping

ACHIEVEMENTS

•**First Place – Line Follower Competition & Terravate Hackathon**(Technex, IIT (BHU) Varanasi) 2025

•**Second Runner-up – CADathon & Fixed-Wing UAV Design Competition**(Technosearch) 2025

•**Second Place – Student Design Competition**(Indian Society of Applied Mechanics (ISAM)) 2025

•**Runner-up – Nirmaan'25 Drones & Robotics Competition**(National Engineering Competition) 2025

•**Incubated Startup Team**(Rolta Incubation Centre, MANIT) 2025

•**Third Runner-up – Student Project Contest**(Annual College Fest) 2026

•**Attended Sakura Science Exchange Program**Japan Science and Technology Agency (JST), Japan 2023