

# AYUSH SINGH

MECHANICAL ENGINEERING STUDENT

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## SUMMARY

Demonstrated academic excellence as a Mechanical Engineering student at PDEU, with a strong foundation in Computational Fluid Dynamics CFD, Programming, and Advanced Manufacturing. Engaged in national-level rocketry competition, internships, and organized events in student clubs. Pursued research interests in robotics, fluid mechanics, and additive manufacturing, aiming to contribute to innovative projects under esteemed faculty mentorship.

## EDUCATION

Bachelor of Technology, Mechanical Engineering | Pandit Deendayal Energy University 2023 – 2027

## SKILLS & INTERESTS

CFD | CAD | Welding | Additive Manufacturing | Programming | Model Rocketry | Aerospace Engineering | Astronomy | Event Management | Leadership | Public Speaking | Art | Lawn Tennis

## WORK EXPERIENCE

**Core Technical Member** | Apogee3 – Aerospace Society of PDEU 2023 – Present

- National Rocketry Student Team
- Ascent Mission Design, Propulsion, Design & Analysis, Flight Computer
- Raised Sponsorship of \$3,600

**Space Science Content Developer Intern** | Tanmaye's Amazing Space 2023

- ISRO Recognized Space Tutor
- Extensive Research on the Sun

**President & Founder** | SciKnowTech VIPNET Science Club 2021 – 2023

- Registered under the government of India
- Organized 20+ events

**Trainer (Intern)** | Royal Technosoft Pvt. Ltd. 2020

- Trained more than 800 International students for C programming and game development with Unity

## PROJECTS

Property and Composition Dependence of hot cracking in LPBF for different materials | IMECE-INDIA-25 | Hyderabad 2025

Predictive Analysis of Multi-Effect-Distillation System using ANN | ICAWTM-25 | Gandhinagar 2025

Real Time Monitoring System for LPBF | ICAWTM-25 | Gandhinagar 2023 – 2024

Additive Manufacturing of Batteries Recent Trends and Challenges | 1st International Symposium on Battery Technology | Gandhinagar 2024

## PROFESSIONAL DEVELOPMENT

Vibration Analysis Bootcamp (10 hrs.)   ASME, PDEU   Gandhinagar	2025
CNC Turning (40 hrs.)   PDEU   Gandhinagar	2024
Essentials of Model Rocketry (10 days)   IN-SPACe, ISRO  Bangalore	2024
LaTeX for Scientific Writing (16 hrs.)   PDEU   Gandhinagar	2024
Computational Fluid Dynamics (40 hrs.)   PDEU   Gandhinagar	2024
Basics of Modelling in NX (40 hrs.)   PDEU   Gandhinagar	2024
Basics of Computational Fluid Dynamics (40 hrs.)   PDEU   Gandhinagar	2024
Advanced Welding Processes (40 hrs.)   PDEU   Gandhinagar	2024
Metal Additive Manufacturing, Intech iFusion SF1 (24 hrs.)   IIW, PDEU   Gandhinagar	2023
Data Science Odyssey (40 hrs.)   PDEU   Gandhinagar	2023
C, C++, HTML-CSS, Python, Arduino, Java   Royal Technosoft   Ahmedabad	2019 – 2021
Advanced Art Course   Kanoria Center for Arts   Ahmedabad	2014 – 2017

## HONORS & AWARDS

3rd rank, Mech-A-Thon – Mechanical Hackathon   PDEU   Gandhinagar	2025
Consolation Cash Prize, MSP Cup Hackathon   IEEE, PDEU   Gandhinagar	2024
1st rank in Mechanical Engineering, 1st Year   PDEU   Gandhinagar	2024
Panelist in “Science Festival – Make, Innovate, Lead”   Respire, GUJCOST   Ahmedabad	2021
3rd Winner in National COVID-19 Idea Challenge on 'AI & Robotics'   VASCSC   Ahmedabad	2020
Finalist, Children Innovation Festival - 2k19   GUSEC   Ahmedabad	2019

## VOLUNTEERING

Coordinator, Basics of CFD   PDEU   Gandhinagar	2025
Lawn Tennis Core Member   Sports Committee, PDEU   Gandhinagar	2024 – Present
Ambassador for Additive Manufacturing   PDEU   Gandhinagar	2023 – 2025
Coordinator, Basics of CFD   PDEU   Gandhinagar	2024
Event Coordinator, 1st International Symposium on Battery Technology   ICTEA, McMaster University, Toronto Metropolitan University, PDEU   Gandhinagar	2024
Science Carnival   SciKnowTech   Ahmedabad	2024
Technical Member   Encode – Programming Club, PDEU   Gandhinagar	2023 – 2024
Logistics Member   Daastan – Drama Club, PDEU   Gandhinagar	2023 – 2024

## CERTIFICATION

Java SE 8 Fundamentals   Oracle   Ahmedabad	2020
Intermediate Art Certification   Art Directorate of the Government   Ahmedabad	2017
Elementary Art Certification   Art Directorate of the Government   Ahmedabad	2016

## ACTIVITIES AND SOCIETIES

American Society of Mechanical Engineers	2024 – Present
Indian Institute of Welding	2023 – Present