

ATHARVA NILESH GUMTE

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PROFILE

A passionate mechanical engineering student with a strong interest in continuous learning and professional development. Always exploring new technologies and trends in the industry through events, conferences, and self-study. Known for adapting quickly, thinking creatively, and offering unique solutions to modern engineering challenges. Combines technical knowledge with management skills to effectively respond to changing situations and work environments.

EDUCATION

Podar International School CBSE Percentage: 91.6 %	March 2020 - May 2021 Pune, India
Rajiv Gandhi Academy of E-Learning school & Science Junior college HSC Percentage: 75.67 %	April 2022 - March 2023 Pune, India
Vishwakarma Institute of Technology BTech - Mechanical Engineering CGPA: 8.6 , SGPA: 8.25	August 2023 - May 2027 Pune, India

SKILLS

- SolidWorks
- ANSYS Mechanical
- MATLAB / Simulink
- Microsoft Office
- Leadership & Management
- Graphic Designing

PROJECTS

Design of Smart Memory Alloy Heat Sink With Adaptive Fin Design for Better Cooling <ul style="list-style-type: none">• Designed a heat sink using Shape Memory Alloy (SMA) and aluminum fins• Simulated the model in ANSYS to evaluate thermal performance• Nitinol fins adapted to heat, boosting cooling efficiency	March 2025 - May 2025
Design, Modeling and Structural Analysis of a Mechanical Screw Jack <ul style="list-style-type: none">• Designed a mechanical screw jack for an SUV• Performed material selection and load analysis• Performed ANSYS structural analysis for stress, deformation, and buckling	February 2025 - May 2025
Analysis and Evaluation of Rear Car Diffuser for Drag Reduction and Enhanced Downforce <ul style="list-style-type: none">• Performed CFD analysis in ANSYS Fluent on a car diffuser• Modified fin shape, angle, and size• Achieved improved airflow and reduced aerodynamic drag	January 2025 - March 2025
Lightweight Design of Aircraft Interior Component Using Topology Optimization and Structural Analysis <ul style="list-style-type: none">• Performed topology optimization of aircraft seat armrest• Conducted FEA for stress, deformation, and fatigue life• Achieved mass reduction while retaining structural strength	July 2024 - December 2024

PUBLICATIONS

Development of an Atmospheric Water Generator System with Peltier Module and IoT Integration **May 24 , 2025**
8th International Conference on Multi-Disciplinary Research Studies and Education (ICMDRSE-2025)
Presented a paper at a **Scopus-indexed** international conference, highlighting a **compact, energy-efficient water harvesting system** using **Peltier cooling** and **IoT-based real-time monitoring**.

ORGANIZATIONS

Vishwa Netrutvam (Mechanical Student's Association), VIT Pune <i>Finance Coordinator</i>	June 2024 - April 2025 Pune, India
Entrepreneurship Development Cell, VIT Pune <i>Sponsorship Coordinator</i>	July 2024 - March 2025 Pune, India
Event Planning and Execution Committee (Student Council), VIT Pune <i>Multimedia Volunteer</i>	August 2023 - May 2024 Pune, India
Social Welfare and Development Committee, VIT Pune <i>Swaacha Pune Volunteer</i>	March 2024 - April 2024 Pune, India

LANGUAGES

- English
- Hindi
- Marathi

CERTIFICATIONS

- SolidWorks
- Design Thinking
- Swaacha Pune Volunteer