

# TEJAS ANIL KAJARI

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## PROFILE

Mechanical Engineering student at Vishwakarma Institute of Information Technology (VIIT) with hands-on experience in vehicle dynamics, industrial component design, and advanced simulation software. Proven problem-solver, skilled in strategic thinking, eager to apply expertise to innovative projects in automotive and R&D sectors.

## WORK EXPERIENCE

- 1) DRDO-R&DE, Pune – Research Intern** **July 2025 – December 2025**
  - Selected appropriate composite materials, followed standard manufacturing procedures, conducted ASTM-standard tests on various laminates, and validated results through FEA simulation for defense applications.
  - Executed VARTM and RFI composite manufacturing processes and assessed rheological behaviour of resins.
- 2) TRIUMF, CERN – Intern (Remote)** **June 2024 – December 2025**
  - Worked on the Intermediate Water Cherenkov Detector (IWCD), part of the Hyper-Kamiokande experiment.
  - Optimized lid component assembly for structural integrity, weight, and cost efficiency, and performed structural and modal vibration analysis of the lid and base plate using ANSYS to validate durability.
  - Involved in cable routing design and component selection to ensure effective detector system integration.
- 3) Vanaz Engineers Limited, Pune - Intern** **June 2024**
  - Contributed in the design and testing of industrial components such as valves and pressure regulators, with emphasis on manufacturing processes and quality standards.
  - Engaged with logistics, production and management teams, understanding supply chain workflows.
- 4) Vishwaracers Club- Vehicle Dynamics member** **June 2023 – March 2024**
  - Contributed to the development of suspension, tire systems, and steering mechanisms for the Formula Student vehicle.
  - Performed structural and stability analysis to validate design integrity and enhance component reliability.
  - Noteworthy my team secured AIR 1 in Formula Bharat CV Category-2024.

## SKILLS

- Engineering Software:** ANSYS, SolidWorks, LS-Dyna, Fusion-360, MATLAB-Onramp.
- Programming & Tools:** C++, Python, MS-Office
- Core Skills:** Vehicle Dynamics, Structural Analysis, CAD Modeling, Supply Chain Management, Composite Materials, Finite Element Analysis (FEA), Thermal Analysis, Manufacturing Processes, Experimental Testing, GD&T.

## PROJECTS

- 1) EV Go- Kart Project**

Designed the vehicle considering dynamic factors such as driver weight, center of gravity, load distribution, and steering geometry. Focused on optimizing structural layout for performance, stability, and handling.
- 2) Muffler Design**

Created a muffler and performed transmission loss analysis for multiple geometries.
- 3) Wheelchair Cum Bed (Applied for Design Patent)**

Developed a patient-friendly wheelchair-cum-bed to improve comfort and ease of mobility in hospitals.
- 4) Lightweight Bus Floor**

Modal analysis was carried out to evaluate the natural frequencies and vibration characteristics of the floor.

## EDUCATION

- 1. Vishwakarma Institute of Information Technology, Pune** **June 2026(Expected)**

B. Tech in Mechanical Engineering—CGPA: 8.27/10 (7<sup>th</sup> Sem)
- 2. RAO Junior College, Pune** **August 2022**

Higher Secondary Certificate (HSC) – 71.33%
- 3. R&DE(E) English Medium School** **July 2020**

Secondary School Certificate (SSC) – 95%