

Dhruv Kanade

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SUMMARY

Mechanical engineering student with practical experience in **lean manufacturing**, **CAD/CAE design**, and **renewable energy analysis**. Skilled in **process optimization**, **FEA**, and **Python-based data analysis**, with proven ability to deliver **lightweight design solutions**, **workflow improvements**, and **energy insights**. Strong collaborator with achievements in **Formula Bharat** and an internship at **Forbes Marshall**.

EDUCATION

Bachelor of Technology in Mechanical Engineering 2023 – 2027
Manipal Institute of Technology, Manipal, Karnataka

EXPERIENCE

Lean Manufacturing Intern – Forbes Marshall Jun 2025 – Jul 2025

- Conducted **Value Stream Mapping (VSM)** for fabrication processes, identifying bottlenecks and improvements.
- Helped achieve an increase of **2–3%** in process speed through lean-based solutions.
- Performed ergonomic assessments using **REBA** to reduce posture-related inefficiencies.
- Supported implementation of **5S, Kanban, Poka-Yoke** with cross-functional teams.
- Assisted in designing fixtures for the **Compact Module Thermodynamic Steam Trap (CMTD)**.

PROJECTS

Structural Engineer – Formula Manipal (Formula Bharat) Apr 2024 – Mar 2025

- Contributed to race car design that achieved **3rd place** at Formula Bharat.
- Reduced chassis weight to **35 kg** while addressing battery pack integration challenges.
- Designed and analyzed structural components using **CATIA V5, Fusion 360**.
- Performed **FEA with HyperMesh and ANSYS**, including composite simulations with ANSYS ACP.

Wind Resource Data Analysis

Aug 2025

- Cleaned and analyzed a real-world **wind energy dataset** (Tamil Nadu, India).
- Used **Python (Pandas, Matplotlib)** to preprocess and visualize wind speed, direction, and power density.

TECHNICAL SKILLS

CAD/CAE: CATIA V5, Fusion 360, ANSYS (incl. ACP), HyperMesh

Lean Tools: VSM, REBA, 5S, Kanban, Poka-Yoke

Programming: Python (Pandas, Matplotlib, NumPy)

Other: FEA, Composite Analysis, Generative Design

CERTIFICATIONS

Generative Design for Additive Manufacturing – Coursera (2025)

Programming for Everybody (Python) – Coursera (2025)

Major Engineering Project (3-course series) – Coursera (2025)

EXTRACURRICULARS & LANGUAGES

Extracurriculars: REDX and dboard Member, Cultural Committee, MIT Manipal

Languages: English, Hindi, Marathi