Diwaakar Jayaprakash

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Summary

Mechanical engineering undergraduate with hands-on experience in CAD modeling, motion analysis, and interdisciplinary tools like MATLAB and Python. Seeking to apply design and data analysis skills in tech-driven environments.

Education

IIITDM Kancheepuram – B.Tech in Mechanical Engineering 2023 – Present
Relevant Courses: Kinematics & Design of Machines, Material Science, Heat Transfer, Manufacturing Processes

Technical Skills

- **Design & CAD:** SolidWorks (Motion Analysis), Fusion 360, OnShape, AutoCAD
- **Simulation & Analysis:** Basic FEA, CFD
- **Programming:** Python, MATLAB (basic), MySQL, C++
- **Core Engineering:** Machine Design, Kinematics, Material Selection
- **Manufacturing:** CNC Machining, 3D Printing, Laser Cutting
- **Documentation:** Canva, MS PowerPoint, MS Sheets / Google Sheets

Projects

Science Cache System, MaRS Rover Society (Startup, Est. 2020) Apr – Aug 2024
- Designed a modular system for efficient sample storage and retrieval.
- Created CAD models using **Fusion 360** and **OnShape**; fabricated for IRC 2025.

Mini Rover – Chassis Design, MaRS Rover Society Sep – Oct 2024
- Designed rover chassis and performed motion/structural simulations in **SolidWorks**.

IRC 2025 – Science Cache System, MaRS Rover Society Nov 2024 – Feb 2025
- Led cache system integration for competition using CAD and rapid prototyping tools.

Experience & Internships

Tech Mahindra – ASML Semiconductor Dept. Intern, Bangalore May – Jul 2025
- Analyzed semiconductor machinery components under ASML workflow.
- Used **MATLAB** for CPD data analysis, visualization, and trend extraction.
- Coordinated across mechanical and data teams for design validation and workflow clarity.

Assistant – EV Safety & Battery Systems Mar – Apr 2025
- Assisted in thermal and load-based analysis using **ANSYS** and thermal cameras.
- Supported conveyor design and hands-on testing with machining tools and fixtures.

Mechanical Team Member, MaRS Rover Society (Startup) Mar 2024 – Present
- Designed the **Science Cache** and **Ubiquity Holder** for IRC 2025 competition.
- Currently developing the **Gripper** and **Modular Chassis** for ERC 2025.
- Hands-on with **CNC machining, 3D printing**, and **laser cutting** for rover parts.

Achievements

- **European Rover Challenge (ERC 2025)** – Ranked **4th globally** among 50+ teams.
- **International Rover Challenge (IRC 2025)** – Ranked **16th globally** among 50+ teams.