

Vipul Gupta

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PROFESSIONAL SUMMARY

Mechanical Design Engineer | Software Engineer
Passionate and detail-oriented mechanical engineer with hands-on experience in 3D design, layout development, and ergonomic analysis using CATIA, DELMIA, and ENOVIA. Skilled in system design, DFM/FMEA practices, tolerance analysis, and process optimization. Aiming to apply engineering and design expertise to develop innovative vehicle systems and product solutions.

PROFESSIONAL EXPERIENCE

Dassault Systèmes Global Services Pvt. Ltd. (formerly 3DPLM)
Software Engineer Specialist | July 2022 – Present

- Designed and simulated plant layouts and workstations using CATIA and DELMIA, optimizing ergonomics and spatial efficiency for clients such as Bridgestone, Amcor, Decathlon, Honda, and CCA.
- Applied DFM and FMEA principles for product safety and design feasibility.
- Conducted 3D modeling, tolerance analysis, and design evaluation aligned with production constraints.
- Collaborated with cross-functional teams to optimize mechanical assemblies for cost and weight reduction.
- Customized 3DExperience platform applications using C++ and CAA for design automation.
- Developed reporting widgets using JavaScript, HTML, and cloud DBMS for ergonomic assessment visualization.
- Object recognition and inference from Large Language Models using Pixtral and Mistral to automate ergonomic analysis.
- Awarded the “Innovative Project of the Year Award” for integrating process automation using AI-driven solutions.

Häfele India Pvt. Ltd.
GET – Sales Executive | June 2018 – June 2019

- • Managed product lifecycle and trade partner relationships, gaining cross-functional exposure to design-to-delivery processes.
- • Coordinated with architects and interior designers to develop customized product solutions.

Ignited Mindz
Senior STEM Educator | July 2017 – June 2018

- • Conducted science and robotics workshops for students, developing strong communication and leadership abilities.

EDUCATION

M.Tech (Design Engineering) – MNIT Jaipur, 2022 | CGPA: 7.98

B.E. (Mechanical Engineering) – MBM Engineering College, Jodhpur, 2018 | 67.2%

Senior Secondary (12th) – Naval's National Academy, Gorakhpur (CBSE), 2013 | 92.4%

Secondary (10th) – Naval's National Academy, Gorakhpur (CBSE), 2011 | CGPA: 10.0

TECHNICAL SKILLS

• CAD & Simulation: CATIA V5 (Part, Assembly, Drafting, Wireframe, Surface Design), DELMIA (Layout, Process Planning, Factory Flow Simulation), ENOVIA (PLM)
• Design Practices: DFM, DFA, DFMEA, Tolerance Stack-up, GD&T
• Manufacturing Knowledge: Welding, Machining, Casting, Assembly Line Design
• Programming: C++, CAA, JavaScript, HTML
• Analysis: FEA (ANSYS), Ergonomic Evaluation, Material Selection
• Tools: MS Office, Project Scheduling

KEY ACADEMIC & TECHNICAL PROJECTS

• Designed and analyzed a Quarter Car Suspension Model using CATIA and MATLAB for stiffness evaluation and FEA correlation.
• Fabricated an All-Terrain Vehicle (ATV) chassis as part of MEGA ATV Championship; led steering geometry and material optimization.
• Developed a Pomegranate Deseeder Machine during M.Tech project integrating mechanical scoring and ergonomic design principles.

INDUSTRIAL TRAININGS

• National Engineering Industries (NBC) – Studied optimization of pulley ratio and bearing division processes.
• Kamal Coach (Newai, Jaipur) – Gained hands-on exposure to manufacturing processes.
• Rajasthan State Road Transport Corporation (RSRTC) – Familiarized with automotive component maintenance and assembly.

CORE COMPETENCIES

• Analytical and problem-solving mindset with a structured approach to design challenges.
• Strong communication and collaboration skills with cross-functional teams.
• Leadership experience through AIESEC and academic projects.
• Enthusiastic learner with a keen interest in automotive design and product innovation.