Arpit Mathur

+91 97849 26836 | mathurarpit2803@gmail.com | www.linkedin.com/in/arpitmathur2803

EDUCATION

Bachelor of Technology in Mechanical Engineering
Birla Institute of Technology, Mesra | CGPA: 9.02 | Ranchi, India | June 2021 - June 2025

WORK EXPERIENCE

School of Mechanical Engineering, Georgia Institute of Technology
Research Intern | Atlanta, United States of America | June 2024 – July 2024

- Achieved a 58.5% reduction in brake pedal weight by utilizing Autodesk Fusion 360's Generative Design feature, resulting in a safer and stronger component compared to conventional designs.
- Ensured design feasibility by conducting finite element analysis (FEA) simulations in Ansys Mechanical, resulting in the identification and mitigation of potential failure points.
- Facilitated the fabrication of a brake pedal prototype through SLS 3D printing, resulting in the successful assessment of manufacturability and real-world application.
- Refined understanding of advanced engineering concepts by synthesizing literature on generative design and FEA methodologies, leading to more informed project decisions and enhanced research skills.

Team Srijan
Vehicle Dynamics Engineer | Ranchi, India | November 2022 – Present

- Developed an accurate tire model in MATLAB using the Magic Formula 6.2 and data from the Formula SAE Tire Test Consortium, enhancing the team's ability to predict tire behaviour under various conditions.
- Engineered new front and rear suspension systems in collaboration with teammates using Lotus Shark software, resulting in an optimized design for the next Formula Student Electric prototype.

PROJECTS

Investigative Study on Effect of Drop Height in Smartphone Drop Test
December 2023 – February 2024
Analysed the correlation between drop height and maximum von-Mises stress for various orientations and angles in Nothing Phone 1 using Ansys Mechanical's explicit solver, resulting in improved proficiency in simulation tools and leading to a deeper understanding of smartphone drop test dynamics and stress behaviour under different conditions.

SKILLS

Technical: Generative Design, Autodesk Fusion 360, CAD, SolidWorks, Finite Element Analysis, Ansys Workbench, MATLAB, Simulink, Rapid Prototyping, 3D Printing Technologies (SLS, FDM), Vehicle Dynamics, Geometric Dimensioning and Tolerancing (GD&T)

Soft: Creativity, Problem-Solving, Critical Thinking, Adaptability, Teamwork

EXTRACURRICULAR EXPERIENCE

Rotaract Club of BIT Mesra
Member | Ranchi, India | February 2022 – February 2024
Organized successful events like BIT Roadies and Gokulashtami Celebration, increasing the club's event footfall by over 10%, resulting in enhanced engagement and visibility for the organization.