Sumedh Dintakurthy

CAD | FEA | Vehicle Dynamics

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OBJECTIVE

Mechanical Engineering M.S. student specializing in CAD design, Vehicle Dynamics, and FEA, with hands-on experience in e-ATV suspension design, prototyping and validation, and designing NVH-optimized motor mount design at Bridgestone India. Proficient in Catia, NX, and Ansys; seeking to contribute rapid prototyping and FEA skills to vehicle engineering projects

EDUCATION

Purdue University   Aug 2025 – Present

Master of Science - Mechanical Engineering

Relevant Coursework: Autonomous Systems

Birla Institute of Technology, Mesra   Aug 2019 – June 2023
Bachelor of Technology - Mechanical Engineering   CGPA: 8.18

RELEVANT EXPERIENCE

Design Intern – Prospira (previously Bridgestone India)| Gurgaon, India   April 2025 – July 2025

- Collaborated with manufacturing and testing teams to validate prototype motor mounts, overseeing quality checks and functional testing to ensure NVH performance met design intent and automotive standards
- Collaborated with in-house and Japanese client R&D teams to design a motor mount optimized for NVH performance, applying GD&T principles with precision
- Supported the development of a weight-efficient and spatially optimized motor mount, balancing performance, packaging constraints and manufacturing feasibility

Analyst Intern – Bain and Company| Gurgaon, India   January 2023 – June 2023

- Led the design audit for a Fortune 500 client in the renewable energy sector, identifying assembly flaws and design anomalies— resulting in a potential cost savings of ~200M dollars
- Updated 150+ design assemblies in Siemens NX, applying GD&T and CAD best practices to ensure documentation accuracy and manufacturability
- Streamlined design correction workflows across teams in India and France, reducing engineering and manufacturing delays by ~1000 hours

Vehicle Dynamics Lead – Team Aveon Racing | Ranchi, India   Aug 2019 – Jun 2023

- Optimized e-ATV suspension (using Vsusp and Lotus Shark), reducing the camber change by ~12% from the previous iteration, during bumps
- Increased anti-dive percentage by 5% through control arm redesign, enhancing braking capabilities
- Fabricated and assembled suspension knuckles and hubs using CNC machining and welding, conducting fitment checks and on-vehicle testing to validate durability under off-road conditions

TECHNICAL PROFICIENCIES

Tools and Softwares: Catia V5, SolidWorks, Siemens NX, Ansys, MATLAB, SImulink

Frameworks and Methodologies: FEA, DFMA, GD&T, PLM, Multibody Dynamics, Root Cause Analysis

Domains: Machine Design, Vehicle Dynamics, Material Selection, NVH fundamentals, Manufacturing Processes

PROJECTS

Suspension Components Design and Structural Validation| Team Aveon Racing

- Designed and validated lightweight wheel hubs and steering knuckles (using CatiaV5 and Ansys), integrating load-path and off-road durability requirements to improve agility and performance
- Validated designs via advanced FEA (static structural, fatigue, nodal) in Ansys under realistic braking, cornering, and off-road impact loads, maintaining safety factors above 1.5 while achieving total weight reduction of 2.45 kilograms

Dynamic Variable Inertia Flywheel| Undergraduate Capstone Project

- Designed a Variable Inertia Flywheel with spring-loaded auxiliary masses, achieving a 35% increase in Moment of Inertia at 4500 RPM, compared to a regular flywheel, for enhanced performance
- Conducted nonlinear transient dynamic simulations in Ansys to validate stable operation of the spring-mass system under centrifugal forces across load cycles