

## EDUCATION

- Clemson University** Aug 2023 - May 2025  
1. *Masters of Science - Mechanical Engineering*
- Clemson University** Aug 2023 - May 2025  
2. *Graduate Certificate - Automotive Engineering*
- MIT World Peace University-Pune** July 2017 - May 2021  
3. *Bachelor Of Technology - Mechanical Engineering*

## SKILLS

**Software skills:** SolidWorks, CATIA, AutoCAD, Siemens NX, Hypermesh, Ansys, Simulink, MATLAB, Python, Creo  
**Technical skills:** DFM, DFMEA, DFA, FEM, CFD, Machine design, Manufacturing, Prototyping, Reliability Testing. Product design, Statistical Process Control, Ms Office, Rapid Prototyping  
**Soft Skills:** Project Management, Cross-functional Collaboration, Problem-solving, Communication, Supplier Co-ordination, Data-driven Decision Making, Customer Interaction, Complaint Resolution

## EXPERIENCE

- SPAN, San Francisco** June 2024 – Dec 2024  
1. *Hardware Engineering Intern*
  - **Owned the end-to-end mechanical design** of SPAN 24, a next-generation **smart electric panel**, driving development from EVT to DVT and ensuring **design feasibility, manufacturability, and reliability** for production.
  - Led EVT product improvements, collaborating with the Product team to optimize **accessibility, wire management, and component fitment**, reducing assembly complexity and enhancing user experience.
  - Executed **Mechanical Reliability** tests and facilitated **Thermal, Electrical, and Certification tests**, ensuring compliance with **UL standards** while improving system durability.
  - Engineered electromechanical assemblies using sheet metal, plastics, and busbars, partnering with **Asia-based vendors** to enhance **DFM** and **DFA**, reducing **manufacturing defects by 83%**.
  - Designed and engineered the SPAN VISOR, a **thermal management** shade structure, reducing panel enclosure temperature by **4-5°C**, improving component lifespan and energy efficiency.
- Mubea Automotive Components, India , Germany** Aug 2021 – Aug 2023  
2. *Design Engineer (Full Time)*
  - **Spearheaded the design and development** of suspension components for **Volkswagen, Ford, Tata Motors, Renault, and Hyundai**, utilizing advanced analysis and simulation techniques on prototypes and CAD models to enhance product performance and durability.
  - Identified new product application and implemented modified process to cut down on product manufacturing cost by **21%** and reduce production time by **3%**
  - Conducted comprehensive engineering analyses and simulations on suspension subsystem designs; **optimized structural integrity** and **weight distribution**, resulting in increase in vehicle stability and performance metrics.
  - Trained and up skilled around **37** employees on various manufacturing processes and technologies
  - Led projects targeting **German and Japanese markets**, collaborating with cross-functional teams from Germany; resulting in a **11%** increase in international sales revenue.
  - Worked on projects specializing in **non linear loading** and subsequent **stress analysis** using **Ansys Workbench**
  - Designed Side load springs with a **side load compensation** of about **15-20%**, enhancing suspension performance and vehicle handling.

## PROJECTS

- Design and manufacturing analysis of a Wheel Rim** March 2025 - May 2025  
1.
  - Designed and analyzed an A356 aluminum wheel rim using Ansys for structural validation and SolidCAST for casting simulation.
  - Optimized mold design and solidification to minimize defects and improve manufacturability using low-pressure die casting principles.
  - Simulated post-processing operations (boring, drilling, countersinking) to ensure dimensional accuracy and CAM compatibility.
- CFD Analysis of Battery Thermal Management Strategies** March 2025 - May 2025  
2.
  - Simulated thermal performance of Li-ion battery packs with in-line, staggered, and finned staggered geometries using forced air convection.
  - Modeled battery cells and enclosure in SolidWorks; performed CFD analysis in ANSYS Fluent to evaluate heat distribution and cooling efficiency.
  - Identified optimal configuration that reduced surface temperatures and improved thermal uniformity, enhancing battery safety and performance.

3. **BIW Structure Development for new Vehicles**

Jan 2024 - April 2024

- Developed an initial BIW layout topology structure that meets requirements for bending stiffness, torsion stiffness, front and rear crash energy management, passenger compartment structural integrity and mass efficiency.

## **RESEARCH & PRESENTATIONS**

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### **Biomechanical consideration of bone density and its influence on stress distribution characteristics of dental implants (Nov 2020)**

*Published: ( Materials Today; Proceedings )*

- Reviewed and analyzed the stress variations arising due to differences in bone density at various locations, their effects on the life and performance of dental implants, and their relevance to the kind of surgical techniques used during implantation.

## **CERTIFICATIONS**

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- Supply Chain Principles, Georgia Tech 2021
- Solar Energy and Electrical System Design, University at Buffalo 2021
- Autodesk fusion 360 Integrated CAD/CAM/CAE, Autodesk 2021