SRIVATSAV JOSUYLA

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SUMMARY

Entry Level Mechanical Engineer with 2+ years of experience designing complex electro-mechanical systems. Proficient in CAD, DFMA, thermal/fluid systems, and rapid prototyping, with a track record of delivering manufacturable, production-ready hardware through cross-functional collaboration

SKILLS

Design: SolidWorks, PTC Creo, AutoCAD, Fusion 360, ANSYS (FEA , CFD).

Manufacturing: FMEA, GD&T,DFM, Tolerance Stack-ups, Sheet Metal, Injection Molding, 3D Printing, P&ID.

Software: MATLAB, Python, MS-OFFICE

PROFESSIONAL EXPERIENCE

Kwik Equip CGE, Pearland, TX — July 2025 - Present

Mechanical Engineer

- Designed and optimized trailer components using SolidWorks, transitioning designs into laser-cut sheet metal and CNC-machined parts to balance structural performance with manufacturability for high-volume production.
- Developed in-house test setups for pressure vessel evaluation, including compressor and plumbing layouts, structural frames, and modular fixtures to support sensor integration
- Performed Acoustic Emission (AE) testing pressure cylinders to detect micro-cracks and ensure requalification compliance, while actively pursuing Level 1 AE certification.

Circularity Fuels, Redwood City, CA — August 2024 – January 2025

Mechanical Engineering Intern

- Designed methane reactors system using SolidWorks, optimizing catalyst supports and reducing footprint by 20%.
- Prototyped corrugated catalyst structures to improve flow uniformity, achieving 20% better distribution efficiency
- Analyzed reactor fluid flow and heat transfer, reducing pressure drop by 10% and improving thermal performance and system reliability.
- Developed and reviewed P&IDs and mechanical layouts, improving manufacturability and cross-team clarity.
- Prototyped and built blowing jigs and an automated slurry-dipping jig, strengthening hands-on R&D and manufacturing prototyping expertise.

Medha Servo Drives Pvt Ltd, Hyderabad, India — September 2021 – September 2023

R & D Mechanical Design Engineer

Project 1: Hydrogen Fuel Cell DEMU

- Designed a roof-mounted sheet metal cooling system structure for a hydrogen fuel cell train, integrating a blower and heat exchanger while ensuring manufacturability, structural integrity, and durability under vibration loads
- Executed design optimization strategies, reducing cooling system weight by 12%, improving structural efficiency.
- Performed Computational Fluid dynamics (CFD) and static structural analysis (FEA) to evaluate airflow resistance and load-bearing capacity of the cooling structure under real-world operating conditions.

Project 2: Vande Bharath Express- TRAIN 18

- Designed and led end-to-end product development lifecycle of traction motor cooling air ducts, including detailed engineering drawings, FMEA reviews, stakeholder signoffs, and design release for manufacturing.
- Conducted detailed FEA and CFD modeling to evaluate structural integrity and airflow performance, enhancing cooling efficiency by 15% and ensuring optimal thermal regulation.
- Coordinated with vendors and fabrication shops to review technical drawings, resolve manufacturability issues, and ensure compliance with specifications during duct fabrication and assembly.
- Delivered 32 cooling ducts in 4 configurations, achieving functional validation and on-time handoff to manufacturing.

EDUCATION

Masters' in Mechanical Engineering, University of Florida , Gainesville, FL — **May 2025**

Course Work: Advanced Elasticity & Solid Mechanics, Failure of Materials in Mechanical Design, Production Engineering, Finite Element Analysis, Composite Materials, Energy Conversion, Heat Transfer.

Bachelor's in Mechanical Engineering, Osmania University, India — **July 2021**

RELEVANT PROJECTS

UF Institute of Food and Agricultural Sciences, Gainesville, Florida — January 2025 - July 2025

Mechanical Engineer

- Designed modular electro-mechanical growth chambers with integrated thermal, lighting, and humidity control.
- Developed custom sheet metal and 3D-printed enclosures using SolidWorks, ensuring thermal isolation and serviceability.
- Integrated multi-parameter control systems with a focus on thermal efficiency and structural stability.