SRIVATSAV JOSUYLA

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EDUCATION

M.S. in Mechanical Engineering | University of Florida | Gainesville, FL **May 2025**

Course Work: Semiconductor Device Fabrication, Production Engineering, FEA, Composite Materials, Failure of Materials in Mechanical Design, Advanced Elasticity & Solid Mechanics, Energy Conversion.

B.Tech. in Mechanical Engineering | Osmania University| India **July 2021**

SKILLS

CAD & Simulation Tools: SolidWorks, Solid Edge, PTC Creo, AutoCAD, Fusion 360, ANSYS, Hyper Works.

Functional Knowledge: GD&T, Tolerance Analysis, DFMEA, Injection molding, DFM, Sheet Metal, P&ID.

Programming & Analytical: MATLAB, Python, MS Office.

PROFESSIONAL EXPERIENCE

Mechanical Design Engineer| UF Institute of Food and Agricultural Sciences **January 2025- Present**

- Designed electro-mechanical modular growth chambers integrating thermal, lighting, and humidity control systems for agricultural automation.
- Developed custom enclosures and mounting systems using **SolidWorks**, ensuring thermal isolation and easy serviceability.
- Integrated multi-parameter environmental control systems into electro-mechanical enclosures, focusing on thermal performance and mechanical stability.
- Architected a modular design for eight independent chambers, enabling scalable mechanical integration and design flexibility.
- Applied **GD&T** to critical interfaces while designing jigs and fixtures to ensure accurate assembly and sensor alignment.

Mechanical Engineering Intern | Circularity Fuels | Redwood City, CA. **August 2024 – January 2025**

- Designed compact reactor in **SolidWorks** to produce ultra-high purity methane, optimizing catalyst supports.
- Developed and reviewed P&IDs, plumbing schematics, and mechanical layout drawings to reduce system footprint by 20%, ensuring clarity for cross-team execution and vendor fabrication.
- Prototyped corrugated catalyst structures to improve flow uniformity, achieving 20% better distribution efficiency.
- Analyzed reactor fluid flow and heat transfer, achieving 10% pressure drop reduction and improved thermal performance
- Operated full-scale methanation reactor, recording temperature data across catalysts to analyze heat distribution.
- Performed on-site troubleshooting of pumps, valves, and instrumentation, ensuring seamless system operation.

R & D Mechanical Design Engineer | Medha Servo Drives Pvt Ltd | India **September 2021 – September 2023**

Project 1: Hydrogen Fuel Cell DEMU

- Designed a cooling system using SolidWorks, improving fuel cell thermal efficiency by 15% mounted on top of the train.
- Executed design optimization strategies, reducing cooling system weight by 12%, improving structural efficiency.
- Performed structural analysis on the cooling system in ANSYS to assess load capacity, followed by prototype construction.
- Created detailed sheet metal drawings including flat patterns, bend lines, and feature callouts, and collaborated with cross-functional teams to finalize design packages for supplier handoff and fabrication.
- Generated and maintained detailed Bills of Materials (BOMs) for the cooling assembly, coordinating with procurement and manufacturing teams to ensure accurate sourcing and production readiness.

Project 2: Vande Bharath Express- TRAIN 18

- Led end-to-end product development lifecycle of traction motor cooling air ducts, including detailed engineering drawings (2D/3D), DFMA reviews, stakeholder signoffs, and design release for manufacturing.
- Coordinated with vendors and fabrication shops to review technical drawings, resolve manufacturability issues, and ensure compliance with specifications during duct fabrication and assembly.
- Enhanced cooling efficiency by 15% using **CFD** modelling and theoretical flow analysis, ensuring optimal thermal regulation.
- Tracked and validated engineering drawing changes throughout development and release cycles, collaborating with QA and manufacturing teams for compliance.

Research Assistant| Defense Research Development Organization | India **February 2021 – May 2021**

- Engineered Auxetics study, boosting durability and flexibility in 15+ NPR materials, designed in **SolidWorks.**
- Analyzed 10+ structural designs using **ANSYS** identifying optimal configurations for mechanical resilience.

Engineering Intern| Bharat Dynamics Ltd | India **January 2020 – February 2020**

- Optimized flow forming parameters on SAE 4130 steel, improving dimensional accuracy and surface finish by 20%.
- Assisted in mechanical characterization of rocket motor tubes through dimensional inspection, hardness testing, and microscopy, contributing to root-cause analysis of manufacturing defects and improving quality assurance protocols.