SRIVATSAV JOSUYLA

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EDUCATION

M.S. in Mechanical Engineering | University of Florida | Gainesville, FL   **May 2025**
Course Work: Specialization in Design and Manufacturing, Production Engineering, FEA, Composite Materials, Failure of Materials in Mechanical Design, Advanced Elasticity & Solid Mechanics, Semiconductor Device Fabrication, Project Management.

B.Tech. in Mechanical Engineering | Osmania University| India   **July 2023**

SKILLS

CAD & Simulation Tools: Solid Edge, SolidWorks PDM, 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 Engineering Intern | Circularity Fuels | Redwood City, CA.   **August 2024 – January 2025**
- Developed a chemical reactor system in **SolidWorks**, optimizing catalyst integration and improving efficiency by 15%.
- Engineered mechanical equipment layouts, P&ID,Plumbing reducing space utilization by 20% within a shipping container.
- Developed a prototype for corrugated sheets to optimize the catalyst geometry, improving flow distribution by 20%.
- Executed reactor fluid flow and heat transfer analysis, ensuring a 10% reduction in pressure drop.
- Conducted comprehensive manual testing of the full-scale reactor prototype to ensure functionality and performance.
- Performed on-site troubleshooting of pumps, valves, and instrumentation, ensuring seamless system operation.

R & D Mechanical Engineer | Medha Servo Drives Pvt Ltd | India   **September 2021 – May 2023**
Project 1: Hydrogen Fuel Cell DEMU
- Designed a cooling system using **Solid Edge** , 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.
- Validated load capacity and system reliability via ANSYS structural analysis before prototyping.
- Led coach roof design, applying GD&T and proposing 35+ enhancements for weight reduction and aerodynamics.
Project 2: Vande Bharath Express- TRAIN 18.
- Designed air ducts for traction motor cooling using **Solid Edge**, achieving a 15% efficiency increase through CFD modeling.
- Optimized thermal regulation and reliability via theoretical flow and pressure drop calculations.
- Conducted ANSYS FEA and CFD to assess stress distribution, refine airflow, and enhance structural integrity.
- Executed **FMEA** by analyzing failure patterns in **ANSYS**, implementing design modifications that enhanced system durability.
- Led on-site inspections at the manufacturing facility, ensuring quality control and duct integration into train system.

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 **Autodesk Fusion 360**, identifying optimal configurations for mechanical resilience.
- Developed product data and Bill of Materials **(BOM)** in **SolidWorks**, streamlining integration and documentation processes.

Engineering Intern| Bharat Dynamics Ltd | India   **January 2020 – February 2020**
- Manufactured 180 SAE 4130 steel tubes via reverse flow forming, boosting efficiency by 25%
- Performed an in-depth study on forming parameters, optimizing roller and mandrel design for enhanced precision.
- Enhanced product quality by 25% through tool, jig, and fixture design and fabrication.

ACADEMIC PROJECTS

Graduate Student Researcher | University of Florida/IFAS   **March 2024- July 2024**
- Designed and implemented modular growth chambers for blueberry breeding for rapid development using **Solid**.
- Integrated environmental controls including temperature, humidity, CO_2 levels, and lighting to replicate day-night cycles.
- Designed an independent system for eight chambers, allowing separate environmental adjustments.

Finite Element Analysis of Heat Exchanger- Periodicity and Symmetry approach   **August 2023- December2023**
- Conducted FEA on a heat exchanger using **Ansys** to assess thermal and structural performance.
- Applied periodicity and symmetry to reduce computational load while maintaining analysis accuracy.
- Analyzed temperature distribution and heat transfer patterns, identifying design improvements for better performance.

Bharat Formula Karting- Team INITIA 4.0   **July 2018 - March 2019**
- Led braking subsystem, winning 1st in design & 2nd in innovation, with full brake system designed in **SolidWorks.**
- Managed theoretical computations for braking torque, caliper, piston dimensions, hub, and disc sizes.
- Discovered cost-effective in-house manufacturing processes, reducing costs by 20%.