Tharun Vaithya Devaraj

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Linkedin | Portfolio

Education

Master's in Mechanical Engineering, San Jose State University   May 2026
- **Coursework:** Manufacturing Process Control, Design and Simulation, Computational Engineering, Advanced Manufacturing

Bachelor's in Mechanical Engineering, St.Joseph's Institute of Technology   May 2023
- **Coursework:** Manufacturing Basics, Mechanical Fundamentals, Design and Analysis,Mechanics of Materials

Work Experience

Trainee, Vestas Wind Systems   July 2023 – July 2024
- Optimized Manufacturing Execution Systems (MES) to enhance production efficiency, ensuring seamless integration with ERP systems for real-time data visibility
- Led the successful implementation and upgrades of MES projects, achieving 100% on-time delivery
- Diagnosed and resolved system issues, reducing downtime through effective troubleshooting and proactive maintenance
- Developed training materials and conducted sessions for end-users, resulting in increased user adoption and system utilization.

Intern, Flowwell Castings   Feb 2022 – Mar 2022
- Performed technical analysis to conduct data analysis and modeling, leading to improvements in project outcomes in a short span
- Assisted in the creation and updating technical drawings and project documents, ensuring accuracy and compliance with industry standards
- Tested and evaluated prototypes with Coordinate Measuring Machines (CMM), achieving precise measurements and comprehensive dimensional data analysis.

Project Experience

Wafer Transfer Arm Design & Optimization
- Designed and optimized a precision wafer transfer arm using kinematic and dynamic calculations to enhance accuracy and repeatability
- Performed stress, torque, and force analysis using hand calculations and Finite Element Analysis (FEA) to ensure structural integrity and minimize deformation

Study of Polymer Composite
- Analyzed the viscoelastic and dynamic properties of jute and pineapple fiber polymer composites to assess mechanical performance
- Utilized Dynamic Mechanical Analysis (DMA) for precise material evaluation
- Developed reports and presentations to communicate findings and recommend optimizations

SAE Effi-cycle (Design of Hybrid Vehicle)
- Led the Powertrain Design Team to achieve a national ranking of 9, utilizing design software such as SolidWorks and CATIA to develop detailed plans, prototypes, and simulations
- Performed FEA and CFD simulations using ANSYS, integrating results to enhance design performance.

Skills

- **Core skills:** Product Design , Product Support, Thermal Analysis, FEA , CAE, Process Improvement, Design for Manufacturing, Failure Analysis, Six Sigma, Manufacturing Process Improvement, Engineering Management, Operations Management, SQL , Project management, Power BI , Root Cause Analysis
- **Technical Software:** Solidworks, CATIA, CREO, AutoCAD, Ansys, MATLAB, Minitab, QDA, Apriso, infor EAM,aPriori
- **Softskills:** Communication,Teamwork,Problem-solving,Adaptability,Leadership,Critical Thinking