Saketh Reddy Thauwtreddy

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SolidWorks | Assembly Drawings | Industrial Design | Production Costing **|** MATLAB| Analysis Skills | Product Strategy
Revit | Research & Development| Failure Analysis | Troubleshooting | Problem-Solving | Adaptability | 3D modeling

Mechanical Design Engineer / AutoCAD Drafter

Summary:
- Extensive experience in Mechanical modeling and designing of components using SolidWorks, AutoCAD at RamTech Engineering Services. Certified training on Industry leading software CATIA, ANSYS, HYPERMESH.
- Hands on experience in the mechanical industry with added experience in supply planning, demand planning, and customer service.
- Managed the Supply chain department for the RAIL sector of TIMKEN Bangalore
- Trained in SAP R3 and SAP ERP for supply and demand planning.
- Extensive knowledge Manufacturing process, Additive Manufacturing, Practical experience with Polyprinter 229 (3D printing).
- Strong Project experience in Electronic packaging and computational techniques and Advanced skills in Ansys workbench and Icepak.
- Strong knowledge in Finite element analysis and integration with MATLAB and ANSYS mechanical.
- Lead the project team in the university and at a professional level, industry level projects.

Education:

The University of Texas, Arlington, TX   **June 2020**
- Master of Science, Mechanical Engineering

New Horizon College of Engineering, Bangalore, Karnataka   **Aug 2017**
- Bachelor of Engineering, Mechanical Engineering

Technical Skills
- **Designing Tools:** Catia, Solidworks, Ansys, Hypermesh, Auto Cad, NX, Inspire 3D, MATLAB, Microsoft Office, SAP R3, SAP ERP, Revit, Solid edge, FANUC, PLM Tools, Inspire 3D, sheet Metal Fabrication,
- **Manufacturing Process:** Additive manufacturing, Manufacturing process systems, and Design for manufacturing. Electronic Packaging Systems & Computational techniques of EP
- **Soft Skills:** Leadership, Communication Skills, Problem-Solving, Work Ethics, Teamwork, Coordinating

Work Experience

System analyst   **Sep 2020 – Present**
VBridgeIT, Charlotte

- Develop mathematical models and create effective workflow solutions using MATLAB.
- Analysis and the implementation of electronic packaging techniques in the system using Ansys workbench and icepack.
- Understanding user-end requirements and implement relevant features.
- Document all observations and regularly provide status reports.
- Supervising and assisting in all computer operation functions.
- Maintaining written documentation and preparing reports on systems.

Mechanical Design Engineer   **Nov 2017 – June 2018**
RamTech Engineering Services, Secunderabad, India

- Responsibilities included creating 2D drawings and 3D modeling using NX.
- Creation of 3D blueprint models using Solidworks and solving on design issues.
- Communicated with potential customers actively analyzed their requirements and converting their requirements into mechanical drawings resulting in an 8% cost reduction.
- Interpret simulation results and provide suggestions for the product design, Manage and collaborate with key vendors.
- Projects included designing of screw jack, Chassis, bench vise, brake pads, droop restrainer, ball bearings, modeling of pipes, sheet metal, and heavy machine parts.
- Healthy practices with geometry, dimension and tolerances of the components.
- Failure modes, stress analysis of 3D models using Ansys workbench and finding efficient ways to reduce failure.
- Worked closely with the CNC manufacturing team for further development, training and detailed instructions on MAZAK 3 - Axis turn-mill, MITSUBISHI CNC EDM machine, and Ultrasonic 20 linear DMG 5 axis.

Graduate Engineer Trainee   **June 2017 – Oct 2017**
Timken India Limited, Bengaluru, India
- One-month Certified training on technical aspects of ball bearing bearings, power transmission products of the company, worked closely with Strategic Pricing as to ingredient plan and Operate as to the product availability under the Supply chain department.
- Forecasting the required bearings for every 3 months using the SAP R3 software [Demand Planning], increasing the accuracy by 3% and parallelly worked under the Supply planning department to integrate the bridge between supply and demand using SAP ERP.
- Purchase requisition to Purchase order, GR/IR payment cycle, Open order management and On Time Delivery through SAP, responsible as production planning for rail bearings as per demand of MTO and MTF parts.
- Lead Customer service role for the RAIL department of the company held meetings and actively communicated with the sales team unit to order attract potential customers, Responsibilities including in working with the Logistics team to track the order and process it by required date to the customer.

Mechanical Intern   **Jan 2017 – May 2017**
RamTech Engineering Services, Hyderabad, India
- 3D modeling and mechanical drawings training with Solidworks, NX, and AUTOCAD.
- Worked under the PLM unit using the SIEMENS PLM tools, responsibilities include tracking the growth of the product till the dispatch process, ERP, Bills of materials.
- Creating the most effective toolpath for CNC machine using CAM software which included the responsibilities to write unique G codes for every operation.
- Performed various lathe operations such as knurling, turning, facing, cutting for various mechanical components.

Project Experience

Floor Cleaning Robot with Pick and Place Mechanism
- Designing and building a robot to clean the floor and pick objects that are an obstacle to the robot, 3D modeling the robot using Solidworks and drafting with AutoCAD.
- The robot is equipped roller with a cleaning cloth, sprays water on the surface to clean and remove stains, it is equipped with a fan to dry the surface.

Manufacturing and Designing Process on Pulley – Shaft Transmission System
- Selection of a manufacturing assembly component withy more than 5 unique parts, Design, and drawing of each specific part using Solidworks, Creation of manufacturing traveler explaining the selection of materials and the manufacturing process.

Applications of computational techniques to Thermo/Mechanical Problems in Microelectronics Systems
- Determination of the temperature, velocity profile, and distribution contours of the microelectronics systems using Ansys Icepak 19.
- Redesign of the chip and heat sink to provide better heat dissipation and effective cooling. Special Project on Thermal Cycling of a Simplified BGA Model [Electronic Packaging]
- Finite Element Modeling of BGA Packages for Life Prediction & 3D modeling of the BGA model on Solidworks, Studying the impact of CTE on the reliability of the PCB.
- Performing thermal loading, determining the stress deformations, and analysis run on the model using Ansys Workbench.

3D Printing, Design Optimization and Analysis on Medical Cabinet for an Aircraft
- Additive manufacturing of a layup composite tooling, Usage of the conventional FRP layup approach.
- 3D modeling of the component using Solidworks, product optimization using Inspire 3D, stress factors, Topology optimization is done using Ansys Workbench.
- Importing the STL file and running the G code for the 3D printing of the component on the poly printer 229.

Re-Design of the end truck for an overhead crane for IMS
- 3D modeling of the component using Solidworks, product optimization using Inspire 3D, stress factors, Topology optimization is done using Ansys Workbench.
- Product design specification developed using Quality Function Deployment (full House of Quality).
- Product architecture definition—functional decomposition and block diagram mapped into physical decomposition and modules. Design for Manufacture (DFM) analysis and Design for Assembly (DFA) analysis. Tolerance stack-up analysis (including diagrams) for key tolerances concerning process capabilities.
- Reliability analysis, Cost analysis, Ergonomics, safety analysis, Failure Modes, and Effects Analysis (FMEA),3D CAD modeling of the end truck.