Dhruvin Dankhara

dhruvindankhara@gmail.com | (437) 988-6732 | in

Skills

CAD: SolidWorks, SolidEdge, AutoCAD

Analysis: Ansys Mechanical Workbench, Ansys Mechanical APDL, Ansys Fluent, PyAnsys, Abaqus

Codes: ASME Section VIII, ASME Y14.5, ASME B31.3, ASME Section III, API 520

Programming: Python, Matlab, Java, TensorFlow, PyTorch, Scikit-Learn, MySQL, Numpy, Pandas

Work Experience

Engineering Project Manager, Pumptronics Inc, Canada **May 2023 - Present**

- Leading the end-to-end engineering life-cycle for pumping and water purification systems manufacturing, overseeing project management, product design, material procurement and manufacturing with total annual revenue of more than 2 million
- Led the development of a new line of rainwater harvesting products compliant with CSA B805, leveraging current capabilities to enter a growing market and create an additional revenue stream
- Launched a multi-pronged optimization strategy, focusing on simplified product design, new vendor development, and lower working capital utilization, achieving at least 3% increase in profit margins and lower lead times in latest projects
- Reduced customer quote preparation time by 50% through simplified, modular and standardised product designs, increasing quote acceptance rate and better customer experience
- Designed and implemented a new engineering document management and design release system, eliminating email releases, leading to improved communication and reduced rework

Stress Analyst & Design Engineer, L&T - MHI Power Boilers, India **Aug 2018 - Jan 2022**

- Design by analysis of some of the world's biggest pressure vessels and product engineering of coal pulverizers in powerplants
- Prepared detailed FE models for various structural and thermal analysis, including steady state, transient, elastic, plastic, limit-load, fatigue (HCF & LCF), and creep simulations for safe and optimal pressure vessel design
- To eliminate repetitive work in post-processing and report preparation, standardized and automated simulation processes using Python scripting and achieved more than 40% reduction in billed hours per project for the whole team
- Exceeded internal benchmarks by simulating 10 times more load cases in same time to design heads & nozzles, skirt hotbox, transportation and lifting arrangements or 3 world's heaviest LC-max reactors weighing more than 2300 tons
- Identified critical design flaw in a reactor's load-bearing section due to specification discrepancies; collaborated with internal & external stakeholders to devise secure solution, ensuring timely delivery and safe reactor operation
- Developed simulation guidelines, and identified internal benchmarks for handling of ceramic lined vessels using user defined post processing functions in Ansys leading to elimination of refractory damage during handling, transportation and lifting
- Revised data management policy and migrated CAD data to SolidEdge Design Manager to eliminate version mismatches among team members, leading to improved system level design and preservation of design revision history.
- Collaborated with a domestic bearing manufacturer to develop bearings for rotary separator assembly eliminating reliance on imported bearings, achieving more than 70% reduction in lead times and more than 50% reduction in bearing costs.
- Developed an automated system for welding and pipe bending parameters selection using machine learning, eliminating a trial-and-error approach used during manufacturing

Education

University of Guelph - MASc in Engineering (GPA: 3.95) **Dec 2023**

Thesis: Case Studies in data-driven methods applied to engineering problems in solid mechanics and heat transfer.

Gujarat Technological University - BE in Mechanical Engineering **Jun 2018**

Gujarat Technological University - Diploma in Mechanical Engineering **Jun 2015**

Certifications

- Lean Six Sigma White Belt - Binghamton University
- Finite Element Methods for Problems in Physics - Coursera
- Machine Learning Engineering for Production (MLOps) Specialization - Coursera