Yashas Jayaprakash

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EDUCATION

Master of Science in Mechanical Engineering — **Aug 2022 – Dec 2024**
San Jose State University — San Jose, California

Bachelor of Science, Mechanical Engineering — **Sep 2015 – Aug 2020**
PES Bangalore South Campus — Bangalore, India

TECHNICAL SKILLS

Design Skills: 2D Drawings, AutoCAD, CREO, Catia V6, SolidWorks, Revit, AutoDesk Suite, GD&T, Manufacturing Process, Specification Reviews, Metal Fabrication, Industrial Design
Analysis Tools: Ansys, Carrier HAP, FEM/FEA, Engineering Analysis, Root Cause Analysis, Quality Control, Estimating,
Computer languages: Python, Excel, MATLAB
Related Tools: Rapid Prototyping, Design for Manufacturability, Product Design, Product Life Cycle Management, Testing

WORK EXPERIENCE

Teaching Associate, Design & Graphics — **Jan 2024 – Present**
San Jose State University — San Jose, California

- Develop comprehensive lesson plans and tutorials in CAD and 3D modeling, focusing on assembly processes and component designs, which improved students' practical skills and understanding of engineering principles including GD&T, ASME Y14.5 and design optimization
- Facilitate hands-on lab sessions and critiques to encourage creative problem solving and increased proficiency in technical drawing and design software among undergraduate students along with the support for project documentation.

Engineering Intern, Components Engineer — **May 2023 – Aug 2023**
Superior Industries — Morris, MN

- Optimized mechanical assemblies using CAD and finite element simulation, achieving a 15% reduction in material costs by enhancing design efficiency and incorporating DFM principles with the components design team.
- Conducted failure analyses (stresses and strain) validation tests on mechanical components, utilizing techniques in metal and plastic molding to reduce failures by 15% and improve overall product performance by 10%.
- Spearheaded performance testing and prototyping of revised pulley and idler designs, integrating advanced fabrication and injection molding techniques, which increased operational efficiency by 25% over previous models.

Projects and Sales Engineer — **Jan 2020 – Jun 2022**
KNND Associates Private Limited — Bangalore, India

- Directed a technical team in the design and launch of next-gen centralized HVAC&R systems using advanced CAD tools and international procurement strategies, resulting in a 15% increase in system efficiency and a 20% reduction in operation costs.
- Performed data analysis during energy audits of chillers, leveraging sheet metal and component testing to achieve a 13% reduction in energy consumption and enhancing operational sustainability.
- Optimized project management processes for mechanical product developments, focusing on cost-effective design and tolerance analysis to cut costs by 9% and accelerate project timelines by 15% without sacrificing quality.

PUBLICATIONS

- Published a research paper in May 2018 on "Synthesis and Mechanical Properties of Araldite/Wooden Powder/Lead Oxide/ PPY/PANI Composites" in the International Journal on Scientific Research in Science and Technology (IJSRST).
- Published research paper on "Role of suspended particles in cooling a stretching film at a desired rate" for Advances and Applications in Mathematical Science, Mili publications, September 2022.

PROJECTS

Ceramic On-Demand Extrusion | San Jose State University — **Aug 2023 – Present**

- Guided a cross-functional team to develop and execute a project plan aimed at enhancing mechanical properties of alumina parts. Achieved a 30% increase in overall project efficiency through effective collaboration and communication among team members, demonstrating methodologies to handle challenges in electromechanical design.

Piston head Optimization | San Jose State University — **Sep 2022 – Dec 2022**

- Accomplished a 28.8% reduction in deformation through static analysis, sensitivity study, and optimization of a domed piston head using Ansys, focusing on system design and tolerance analyses to minimize piston deformation under a compression ratio of 9.5:1.