

PRAVEEN KILARU

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SUMMARY

Motivated Mechanical Engineer with a strong foundation in manufacturing processes, process optimization, CAD modeling, FEA analysis, and quality control. Skilled in Lean Manufacturing principles, committed to enhancing production efficiency, product performance, and overall workflow optimization. I am eager to apply my skills in a full-time role within mechanical, manufacturing, or process engineering, where I can contribute to a forward-thinking team and drive impactful innovations.

EDUCATION

Master of Science – Mechanical Engineering

Ira A. Fulton School of Engineering, Arizona State University, Tempe, AZ

Aug 2023 - May 2025

GPA – 3.56

Bachelors of Technology - Mechanical Engineering

Lakireddy Bali Reddy College of Engineering, India

Aug 2020 - May 2023

GPA - 3.7

SKILLS

- **Mechanical Engineer:** FEA, Mechanical system design, Energy Systems, Material science, GD&T, HVAC, Arduino, and Injection Molding.
- **Manufacturing Engineering:** CNC Machining, 3d printing, Calipers, Process optimization, root cause analysis, failure analysis, Lean manufacturing, Lean Six Sigma(Green Belt), equipment design, production line support, and Quality control techniques.
- **Process Improvement:** RCA, Continuous Improvement, Design of Experiments (DOE), Statistical Process Control (SPC), FMEA.
- **Safety & Environmental:** Compliance with safety regulations, hazardous materials handling, 6S principles, risk management.
- **Softwares & tools:** AutoCAD, SolidWorks, CATIA, Python, MATLAB, Autodesk Inventor, ANSYS, and MS Office.
- **Technical Documentation:** Creation of specifications, bill of materials (BOM), process flowcharts, and detailed drawings.
- **Soft Skills:** Project Management, Interpersonal skills, Strong Communication, Problem Solving, Teamwork.
- **Adaptability:** Willingness to learn anything which needs to be improved according to company requirements.

PROFESSIONAL EXPERIENCE

1. CNC Machine Operator

Kusalava International Pvt Ltd

May 2019 - Nov 2019

Vijayawada, Andhra Pradesh, India

- Operated precision CNC machinery for manufacturing mechanical components, ensuring design accuracy and meeting tolerance specifications.
- Enhanced production efficiency by optimizing machinery calibration, achieving 15% improvement in output.
- Operated precision machinery, achieving 99.8% accuracy in product quality; diligently maintained production logs.

2. Design Engineer Intern

Shoptaki

May 2024 – Aug 2024

Tempe, AZ (Remote)

- Designed 3D models for EV chargers, improving design accuracy and ensuring compliance with technical specifications.
- Applied advanced surface modeling techniques with SolidWorks to craft detailed geometries for EV charger components, improving compliance checks by 30%. Conducted FEM analysis for structural integrity and material optimization of components.
- Produced technical drawings for EV chargers using SolidWorks, increasing production accuracy by 25%, reducing rework.

PROJECT EXPERIENCE

Finite Element Analysis of Fused Deposition Modeling Process for Additive Manufacturing using ANSYS

Jan 2024 - May 2024

Software: Inventor, ANSYS Workbench, MATLAB

- Developed FEA models to analyze thermal management and stress distribution in FDM processes, proposing solutions to reduce residual stresses and improve material performance.
- Proposed improvements for FDM process parameters of layer thickness, orientation, cooling rates, significantly reduced residual stress.

Control Chart Techniques for an Autoregressive Process

Aug 2023 - Dec 2023

- Applied Statistical Process Control (SPC) techniques, including EWMA and CUSUM control charts, to monitor processes with autocorrelation and improve process stability.
- Improved process detection by 20% and reduced false alarms, enhancing the reliability of SPC in dynamic environments.

ACCOMPLISHMENTS

- Established and led a COVID rapid response team in 2021, receiving recognition from the Little Hands organization for saving lives.
- Advanced to the final round of the APSCHE Excellence Awards 2022 for Community Service.
- Awarded the Certificate from ISSC for exceptional Service, dedication and efforts in fostering a vibrant and diverse environment.

CERTIFICATIONS

| Certified Lean Six Sigma Green Belt | Solid Edge Mechanical - Associate Level Certification | ASME Membership | Semiconductor Fabrication 101 | Project Management and Interpersonal skills certified | Auto desk Fusion 360 | Advance certification on emerging technologies.