Lakshya Tiwari

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Professional Summary

Dynamic Mechanical Engineer with expertise in advanced materials, mechanical design, and simulation. Highly skilled in CAD tools (SolidWorks, Creo, AutoCAD) and programming (Python, MATLAB). Proven track record in leading product development from concept through production, emphasizing efficiency, sustainability, and high-performance standards. Adept at managing design documentation, collaborating with cross-functional teams, and delivering innovative engineering solutions that meet regulatory requirements and exceed project expectations.

Experience

BCVS Group Inc. **Austin, TX**
Mechanical Engineer **September 2023-Present**

- Modeled mechanical assemblies in SolidWorks 2023, improving design precision, structural strength, and manufacturability while adhering to industry standards and regulatory guidelines.
- Engineered molded components using DFM/DFA principles, ensuring durability, functionality, and cost-effectiveness through close collaboration with suppliers and cross-functional teams.
- Applied GD&T to control part tolerances and enhance alignment, consistency, and performance across the production and assembly processes.
- Developed medical device designs compliant with FDA, ISO 13485, and GMP, ensuring product safety, regulatory compliance, and quality standards.
- Utilized rapid prototyping and 3D printing to accelerate design validation, refine concepts, and improve testing and iteration efficiency.
- Authored test protocols, managed BOMs, and executed validation procedures, ensuring smooth compliance with regulatory and design requirements.
- Conducted FEA and life cycle testing to enhance product durability, performance, and structural reliability under real-world conditions.
- Implemented Lean and Six Sigma methodologies to optimize production workflows, improve efficiency, reduce costs, and maintain high-quality standards.

Solinst Canada Ltd. **Tempe, AZ**
Mechanical Engineer **June 2023-August 2023**

- Designed mechanical packer components in Creo, ensuring functionality and manufacturability while addressing project specifications and testing constraints.
- Produced detailed 3D models and prototypes, ensuring product quality through design iteration and close coordination with production teams.
- Conducted CFD simulations in ANSYS to enhance performance, structural integrity, and efficiency under varying operational conditions.

Manufacturing Innovation Lab **Tempe, AZ**
Research Assistant **October 2021-May 2023**

- Conducted advanced research, applying statistical analysis to drive innovations and improve efficiency in manufacturing systems.
- Designed and tested CAD prototypes, refining functionality and manufacturability to contribute to cutting-edge research projects.
- Authored technical reports, presenting findings and ensuring compliance with academic and industry standards.
- Collaborated with interdisciplinary teams to streamline experimental processes, optimizing research outcomes and advancing technology.

Air India Ltd. **India**
Intern **May 2018-July 2018**

- Performed mechanical troubleshooting and maintenance for aircraft systems, ensuring compliance with safety protocols and optimizing operational performance.
- Assisted in the development and execution of repair procedures, contributing to enhanced aircraft reliability and minimized downtime.

Technical Skills

- **Languages & Software**: MATLAB, Python, LabView, Minitab, Excel Macros, PLM software, LabVIEW
- **Design & Analysis Tools**: AutoCAD, SOLIDWORKS, CATIA V5, Fusion 360, PTC Creo, Siemens NX, ANSYS, COMSOL Multiphysics, Abaqus, GD&T
- **Certification**: Autodesk CAD/CAM/CAE for Mechanical Engineer, Six Sigma Green Belt, Digital Manufacturing & Design Technology, Autodesk Generative Design, CAD and Digital Manufacturing

Education

Arizona State University, Tempe, AZ
Master of Science: Aerospace Engineering **August 2021-May 2023**

SRM Institute of Science & Technology (KTR), Chennai, India
Bachelor of Science: Aerospace Engineering **August 2016-May 2020**