Shubham Jadhav

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EDUCATION

Master of Science, Mechanical Engineering **Graduating Date: May 2024**
Arizona State University, Tempe, AZ **Grade – 3.59 / 4.00**
Bachelor of Engineering, Mechanical Engineering **Graduated Date: May 2022**
University of Mumbai, Mumbai, India **Grade – 3.58 / 4.00**

SKILLS

Design and Analysis: AutoCAD, Fusion 360, Solidworks, Ansys fluent, PTC Creo, Revit, JMP software, Siemens NX, QGIS
Programming and others: Python, Six Sigma Yellow Belt, LabVIEW, myDAQ, Microsoft Office (Excel, Word, PowerPoint), MATLAB

WORK EXPERIENCE

Arizona State University, Arizona | Research Assistant **Apr 2023 – Present**

- ***Detection of a leak in a Canal***
  - Detected leaks in the canal by utilizing satellite images and conducting image analysis in QGIS, identifying 15 previously undetected leaks
  - Produced a novel approach to leak detection using MATLAB, which improved accuracy by 20% compared to traditional methods
- ***Spectral Analysis and Data Acquisition***
  - Analyzed over 50,000 data points on spark generation in a vacuum by space rockets, leading to the discovery of a new method for measuring spark generation in space that improved accuracy by 15%
  - Generated a unique data recording system using MyDAQ, resulting in automatic data collection during experiments, increasing efficiency by 40%

Arizona State University, Arizona | GSA | Solidworks **Nov 2022 - Jan 2023**

- ***Design of Oscillating platform to study Internal Wave Dynamics***
  - Created model simulations with accuracy within 2% error and a reduction factor of 80%, enabling deeper exploration into the structure's behavior
  - Conceived experimental FEA of oscillating platform to analyze irregular internal wave dynamics behavior, leading to successful formulation of quantitative models

Bharat Bijlee Ltd., India | Mechanical Engineer **Jun 2021 – May 2022**

- ***Manufacturing and Production***
  - Operated motor coil winding machine to produce motors, achieving a production rate of 100 units per hour and increasing overall efficiency by 20%
  - Implemented quality control measures during the insulation process, resulting in a decrease in defective units by 15% and reducing rework time by 30%
- ***Quality Inspection***
  - Directed thorough quality inspections daily, performing tests such as electrical resistance, breakdown voltage, continuity, dissipation factor, and pinhole tests on copper wire
  - Identified and documented a 10% increase in defective copper wire through analysis of test results and promptly reported findings to the production team for corrective action
- ***Logistics and Supply chain***
  - Monitored inventory levels using the SAP system, analyzed production needs, and reduced inventory cost by 20% through regular SAP analysis
  - Provided detailed analysis and reporting on logistics operations including costs, productivity, and customer service metrics, identifying areas for improvement that resulted in a 20% increase in overall efficiency

PROJECTS

Optimization of Semiconductor Deposition Rate| Team Lead | Python **Aug 2023 – Dec 2023**

- Developed a Bayesian optimization algorithm to optimize semiconductor deposition rate, resulting in a 20% increase in deposition rate leading to cost reduction and enhanced product performance
- Implemented python code to automate the data analysis process for semiconductor deposition, reducing analysis time by 50% and allowing for real-time decision-making

Investigation of the Cleaning Power of Detergent| Team Lead | JMP **Jan 2023 – Apr 2023**

- Researched the cleansing efficiency of two formulations within a $2B market, identifying differences in performance and cost implications for variable washing conditions
- Processed data from twenty experiments to compare performance under temperatures up to sixty and agitation levels up to 70 rpm, resulting in a 40% disparity between formulae

Design and Development of Skin Grafting Tool | Team Lead | Solidworks **Jun 2021 – May 2022**

- Optimized twenty-five existing product designs to satisfy customer requirements and improve engineering performance and delivered a 15% increase in engineering performance
- Developed an exact Skin Grafting Tool prototype in SOLIDWORKS for medical implantation and achieved a uniform thickness of 0.15mm-3mm with 90% accuracy in 3 months