

SURAJ RAVINDRA KUMBHARE

surajkumbhare16@gmail.com | +1-7799021468 | Dekalb, Illinois | [LinkedIn](#)

PROFESSIONAL SUMMARY

Dynamic Industrial Engineer with an MS in Industrial & Systems Engineering and 4+ years of experience in manufacturing process optimization, continuous improvement, change management, and project management. Proven success in reducing defects, costs, and lead times using Lean and Six Sigma methodologies. Expertise in statistical modeling, SPC, PFMEA, and process simulation using Simio. Detail-oriented and analytical with strong problem-solving, troubleshooting skills, adept at leading cross-functional teams, and implementing data-driven solutions following best practices. Proficient in Python, Power BI, and AutoCAD for automation and performance monitoring. Strong communicator with a focus on documentation for process improvements.

PROFESSIONAL EXPERIENCE

Industrial Engineer (Co-Op), WernerCo, Illinois, USA

(January 2023 – May 2024)

- Led continuous improvement initiative using Value Stream Mapping (VSM), resulting in a 45% inventory reduction in the forming area of the saddle box manufacturing process through targeted optimizations.
- Deployed Statistical Process Control (SPC) charts to monitor production quality, resulting in a 25% reduction in defects.
- Addressed 5 safety concerns by conducting category-wise Process Failure Mode and Effects Analysis (PFMEA).
- Utilized **Lean** tools (**5S, 5T, Kanban, and 2-bin systems**) to standardize kitting racks, reducing missing part incidents by 35%.
- Established a standard man-hour for forming, cutting welding, and assembly operations using **Time studies** and **MTM**.
- Created a **Power BI dashboard** to monitor real-time KPIs, improving visibility on quality, production, and scrap data.
- Engineered a user-friendly Tooling Database in **MS Access**, reducing tool search time by 60%.
- Applied **SMED** (Single-Minute Exchange of Dies) principles reducing tool changeover times by 10%.
- Programmed a **Python-based machine learning model** to predict part processing time.
- Modeled a **simulation** for the Packrat welding cell using **Simio** to eliminate one station and saved \$110,000 annually.

Process Engineer, Hem Corporation Pvt. Ltd., Thane, India

(April 2021 – August 2022)

- Built a Transportation Management System to track the real time status of received and in-transit shipments.
- Devised **A0-B1** strategies with multiple vendors to reduce raw material costs yielding \$500,000 annually.
- Streamlined the Material Purchase Reports, Non-conformance Reports (NCR), and Production Order Reports in SAP.
- Executed **8D methodology** through collaborative cross-functional efforts, improving packaging and reducing NCRs by 40%.
- Implemented a returnable crate system for certain vendors to reduce packaging cost saving \$180,000 annually.
- Introduced inventory control strategies, including Make to Stock, Make to Order, and Just in Time, resulting in optimized warehouse space utilization and a 50% reduction in inventory holding cost.

Manufacturing Engineer, Yagnm Industries Pvt. Ltd., Navi Mumbai, India

(September 2020 – March 2021)

- Drafted equipment layout drawings for a spices grinding plant using **AutoCAD**, optimizing floor space utilization.
- Led material planning and supplier quality improvement initiatives, resulting in a 15% improvement in part quality.
- Achieved a 10% reduction in budgeted project costs through detailed **cost analysis** and **strategic material planning**.
- Implemented part clustering and logistics network optimization, reducing timelines by 20% and saving \$20,000 annually.
- Defined **standard work** for determining EOQ (Economic Order Quantity), POQ (Periodic Order Quantity), and MOQ.

Operations Engineer, SMS Engineering Services, Mumbai, India

(April 2019 – March 2020)

- Reduced project lead times by 30% through timely procurement of mechanical, electrical, and instrumentation components.
- Collaborated with vendors to enhance procurement processes and ensure adherence to quality standards, resulting in a 24% reduction in procurement costs through strategic quality-based volume purchasing.
- Minimized product defects and non-compliance incidents by 5% through on-site **quality inspection and testing**.

Quality Engineer, SK Engineering & Works Pvt. Ltd, Mumbai, India

(July 2018 – March 2019)

- Developed **SOPs, Process flow diagram, and Process Control sheets** for ISO 9001:2015 certification.
- Contributed to 16% reduction in warranty claims by identifying valve defects through **quality inspections and testing**.
- Coordinated and completed **PPAP** submissions, ensuring valves met quality standards and boosting certification rate by 10%.
- Designed and maintained **APQP** control plans, Process Failure Mode and Effects Analysis (PFMEA), and **process flow diagrams** to identify and mitigate risks in valve manufacturing processes.
- Investigated valve testing failures using Design of Experiments (DOE), **control charts**, and **root cause analysis**. Enacted Corrective and Preventive actions (CAPA), achieving a 18% reduction in defect rates and enhanced product reliability.
- Conducted **process capability analysis** to improve manufacturing process performance, and ensuring quality compliance.
- Elevated Cpk index from 1.33 to 1.77 by refining valve testing procedures, resulting in an 8% reduction in Defects Per Unit.

TECHNICAL SKILLS

Software - Python, Power BI, Tableau, SQL, SAP, Simio, Minitab, IBM SPSS, AutoCAD, SolidWorks, MS Office (Word, Access, PowerPoint, Project, Excel), Focus 9 ERP, JD Edwards, Visio

Training and Certification - Lean Six Sigma Yellow Belt, Six Sigma Foundations, Supply Chain and Management Tips

EDUCATION

Northern Illinois University, Dekalb, Illinois

(August 2022 – May 2024)

Master of Science in Industrial & Systems Engineering

Lokmanya Tilak College of Engineering, University of Mumbai, India

(August 2014 – June 2018)

Bachelor in Engineering (Mechanical Engineering)