Felix Onyango Ocham

Mechanical Engineer Transitioning to Data Analyst

Contact Details

felixonyango.io

Executive Summary

I am an analytical thinker and detail-oriented professional transitioning from mechanical engineering to data analytics—a move driven by my passion for deriving actionable insights from complex datasets. With hands-on experience in data analysis tools like Power BI, SQL, Python (Pandas, NumPy, Matplotlib), and advanced Microsoft Excel techniques, I bring a unique blend of technical expertise, domain knowledge, and a problem-solving mindset. My background in mechanical engineering has honed my ability to approach challenges methodically, ensuring accurate, impactful solutions. I thrive in collaborative environments, leveraging data to drive business decisions and operational efficiency. If you're looking for someone who can bridge the gap between raw data and strategic outcomes, let's connect!

Skills

- **Technical Expertise** : Proficient in Python, SQL, Power BI, Excel (advanced formulas, PivotTables, regression analysis), and visualization tools.
- **Project Portfolio** : Demonstrated success in analyzing real-world datasets such as Amazon Sales, Northwind Traders, and Stack Overflow surveys using cutting-edge tools and methodologies.
- **Industry Experience** : Over 5 years of experience managing data-driven initiatives in manufacturing, automotive assembly, and quality assurance.
- **Certifications** : Six Sigma Green Belt, Quality Management Foundations, Minitab, Industrial Design CAD Technician, Statistical Foundations, and more.
- **Adaptability & Growth Mindset** : Successfully transitioned from mechanical engineering to data analytics through self-directed learning and practical projects.

Experience

Data Analyst

Self-Directed Projects | August 2023 – Present

- GitHub Contributions: Developed robust data pipelines and visualisation.:
- Northwind Traders, Adventureworks, & Amazon Sales Dataset: Analysed sales trends using Power BI and PostgreSQL (joins, window functions, ERDs).
- Stack Overflow 2024 Survey: Conducted exploratory data analysis (EDA) using Python libraries (Pandas, NumPy, Plotly) and published findings on Kaggle.
- Microsoft Excel Mastery: Created dynamic reports using advanced formulas, lambda functions, XLookup, array formulas, and regression models.

End of Line Engineer (EOL)

Associated Vehicle Assemblers (AVA) | August 2022 – July 2023

Data-Driven Decision Making :

- Daily data collection on quality issues in MS Excel.
- Weekly analysis of said data using Pareto Charts to identify common quality issues.
- Weekly analysis of EOL turnaround time in MS Excel to plan for the succeeding week based on monthly revenue targets.
- Using Power BI to present quality issues to the manufacturing and production departments for successful collaboration in cutting costs and quality improvement.
- Maintain a record of all assembled vehicles and their status in MS Excel.
- Using Pivot Tables to create summaries of vehicles' status per client.

Mechanical Engineering Tasks:

- Staying up to date with the quality standards under ISO 9001:2015.
- Collaborating with the Original Equipment Manufacturer (OEM), who supplies CKD kits to ensure compliance with their quality and product integrity requirements.
- Administrative duties such as: Supporting and coaching staff based on skill gaps, assessing staff competency, creating EOL schedules and staff duties, preparing skill matrices per JD, overseeing the successful analysis and resolution of quality and technical issues, and ensuring efficiency by reducing waste.
- Leading EOL in quality assurance and quality control measures to improve EOL Operations.
- Collaborating with other engineering departments to create plans that improve production and quality, and cut costs.
- Resolving customer complaints by placing containment actions and conducting root cause analysis to implement solutions.
- Overseeing End of Line (EOL) processes, which include, but are not limited to: Major/Minor Rework, Diff Lock Test, Break Test, Road Test, Wheel Alignment, Shower/Leak Test, Head Lamp

Alignment, Parts Retro Fitments, ECU Flashing, Error diagnosis and Vehicle Troubleshooting.
- Ensuring health and safety codes are followed at the EOL.
- Setting appropriate Turn Around Time (TAT) for EOL processes to ensure hitting of monthly revenue targets.
- Logging into customer management systems to update the status of their vehicles.
- Determining the appropriate machines, tools, and equipment needed at the EOL station to remain up to date with current technologies and processes that uphold the efficiency of EOL processes.

Quality Engineer

Megh Cushion Industries (MCI) Ltd. | January 2021 – July 2022

Data Related Tasks:

- Tracking the status of clients' requests using Conditional Formatting in MS Excel to highlight quality issues and their severity to create an evidence-based action plan.
- Using Power Pivot and Pivot Tables to prepare weekly non-conformance analysis for all production sections and document defects to prevent recurrence.
- Using MS Excel to develop acceptance sampling models to evaluate the performance of suppliers based on product quality and quantity.
- Data collection of material sizes in MS Excel.
- Running ANOVA on the said data to verify the measuring equipment.

Mechanical Engineering Tasks:

- Periodic auditing of the quality management system based on ISO 9001:2015.
- Preparation of quality specification sheets with visual work instructions, quality control check sheets, and ensuring that all quality documents are up to date as per the industry standards and regulations.
- Designing inspection fixtures and go/no go plugs for new products in Autodesk Inventor 3D modelling and designing software.
- Reviewing mechanical drawings of motorcycle parts, automobile seat foam, seat fabrication works, and seats CKD assembly, documenting their process flow, and overseeing their implementation.
- Material testing (Salt Spray, adhesion, pencil, xylene, thickness testing of powder-coated parts, tensile tests for metallic tubes, and Indentation Form Depression (IFD) tests for polyurethane foam).
- Initiating and maintaining a corrective actions tracker to ensure all stakeholders implement their action plan.
- Evaluation of suppliers by creating acceptance sampling criteria, analysing incoming material inspection reports, and creating a list of preferred suppliers based on quality and quantity.
- Conducting measurement systems analysis for all measuring

tools and equipment to verify the conformance of processes and products.
- Production part approval process (PPAP) for all new products.
- Preparing training documents and ensuring operators are well-trained on new parts.

Quality Controller

Apex Steel Ltd. - Tube Mill Division | February 2018 – July 2020

Data Related Tasks:

- Data collection on the production process in MS Excel.
- Plotting said data on Statistical Quality Control Diagrams in MS Excel to ensure products meet the set internal and statutory requirements.
- Using MS Excel to maintain an inventory of production resources.
- Using Conditional Formatting on the said inventory to show products that need to be procured.
- Using MS Excel to track input material against wastes and yield in the production report.
- Using Hypothesis Tests to analyse short runs in production data to see if the customers' margin of error is acceptable.
- Using the above outcomes to collaborate with the production team on the corrective and preventive actions.
- Keeping records of inspections, non-conformances, customer complaints, rejects, and applying corrective and preventive measures.
- Tracking monthly trending of the data against customer rejection targets and company standards.

Mechanical Engineering Tasks:

- Monitoring all production processes (Metal Sheet Slitting, Tube rolling, and Packaging), to ensure products meet the set internal and statutory requirements.
- Supervising production shifts, managing product inventory, and preparing work instructions and production reports.
- Collaborating with quality and system engineers and production supervisors, to help identify training needs and participate in routine refresher training to ensure continuous improvement/competency.
- Preparing annual calibration calendar, internal calibration of measuring instruments, and ensuring duly execution of all external calibrations.
- Attending to clients' complaints and rejections through initiating root cause analysis, and corrective and preventive actions with the production team.
- Keeping records of inspections, non-conformances, customer complaints, rejects, and applying corrective and preventive measures, as well as monthly trending of the data against set customer rejection targets, and company standards.
- Preparing standard manufacturing drawings in Autodesk AutoCAD for CNC operations.
- Training production engineers on Autodesk AutoCAD.

Education

Masinde Muliro University of Science and Technology / BSc. Mechanical and Industrial Engineering

Second Class Honours Upper Division.

EBK Reg. No.: B12876

Ramba High School / KCSE Certificate

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Certifications and Knowledge Areas

- Six Sigma Green Belt
- Quality Management Foundations
- Industrial Design CAD Technician
- Minitab
- Statistical Foundations
- Microsoft Excel & Power BI