Unarine Timothy Tshimauswu

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PROFESSIONAL SUMMARY

Data and Machine Learning practitioner with 2+ years of delivering analytics and ML solutions in operations, finance, and customer domains. Possesses a solid foundation in Python, SQL, Power BI, and cloud platforms, with practical experience automating ETL pipelines, developing predictive models, and designing decision-support systems. Demonstrated results include a 10% cost reduction, an 8% increase in throughput, an R38M reduction in loss, and 40–50% improvements in reporting efficiency. Currently developing cloud-native Data & ML systems on AWS, aiming for roles such as Data Scientist, ML Engineer, and AI/ML Architect.

SKILLS SUMMARY

Programming & Querying: Python, SQL, R, SAS
Machine Learning: Classification Models, Feature Engineering, Model Evaluation, XGBoost, scikit-learn
Data Engineering: ETL Automation, Power Query, Data Pipelines, API Integration
BI & Visualization: Power BI, DAX, Tableau, Excel Modelling, Data Modelling
Cloud & Databases: SQL Server, SAP, Azure, AWS, Databricks
Soft Skills: Problem Solving, Analytical Thinking, Collaboration, Stakeholder Engagement

WORK EXPERIENCE

Financial Data Analyst |Ruach Consulting Solutions | Pretoria, Gauteng **Dec 2024-Present**

- Designed and implemented analytics solutions that consolidate financial and operational data into decision-ready reporting models.
- Built automated SQL and Power Query ETL pipelines, reducing manual reporting effort by 50% while enhancing data accuracy and consistency.
- Developed Power BI dashboards for an NGO managing R3M+ annual budgets, improving visibility into cash flow, expenditure, and funding performance.

Process Data Analyst |Arcelor Mittal South Africa| Gauteng **Mar 2022-Nov 2024**

- Designed performance analytics solutions on high-volume production and downtime datasets using SQL Server and Power BI, contributing to a 10% reduction in operating costs.
- Applied statistical modelling and data analysis to identify failure patterns and implement solutions that reduced downtime by 8% using Python and Microsoft SQL
- Developed a real-time production reporting system integrating SQL databases with web dashboards.
- Built optimization models analyzing energy usage, product mix, and furnace configuration to identify cost-saving opportunities, leading to R15M savings in energy costs
- Collaborated with operations, maintenance, automation, and IT teams to define KPIs, validate data quality, and align analytics with business objectives.

Engineer in Training |Arcelor Mittal South Africa| Gauteng **Mar 2022-Nov 2024**

- Analysed production datasets using SQL, Python, and Excel, supporting throughput improvements of 8 percent.
- Performed product defect and process-variation analysis using statistical methods and Power BI, contributing to a 10% reduction in customer complaints.
- Conducted process analysis through Excel and SQL Server, using process control analytics and scenario modelling, leading to R38 million in mechanical-loss savings.

PROJECTS

1. Credit Default Risk Management System| LINK **2025**
Python, SQL, SAS, XGBoost, Power BI, FastAPI, Streamlit, AWS, Banking

- Modelled 1M+ loan applications to predict probability of default.
- Benchmarked multiple models and selected tuned XGBoost with strong precision to reduce false approvals.
- Built a full scoring pipeline with FastAPI and Streamlit for real-time lending decisions.
- Designed Power BI dashboards highlighting risk segments and approval-quality trends.
- Impact: Supports safer credit decisions, reduces lending risk, and speeds up assessment workflows.

2. NGO Financial Transparency & Reporting Automation| LINK **2024**
Excel, Power Query, SQL, Power BI, Azure Data Factory, Databricks, Financial Accounting

- Built an automated ETL system integrating SQL sources for financial reporting.
- Developed dashboards for cash flow, donor funding, and expenditure analysis.
- Impact: Improved reporting accuracy and reduced manual preparation time by 50%.

3. Customer Segmentation & Marketing Personalization Engine| LINK **2025**
Python, SQL, PCA, K-means, Decision Tree, Streamlit, Customer Analytics

- Analyzed customer behaviour, income bands, and spending patterns to create financial behaviour clusters.
- Built PCA + K-Means pipeline to segment customers for tailored product offerings.
- Developed a Streamlit app for scoring new customers.
- Impact: Enables targeted marketing and improves cross-sell accuracy.

4. AI-Driven Customer Church Prediction & Retention Engine| LINK **2025**
Python, SQL, Tableau, SageMaker, Redshift, Glue, QuickSight

- Built an end-to-end churn prediction pipeline covering data ingestion, feature engineering, model training, inference, and reporting.
- Integrated churn-risk outputs into automated retention workflows using event-driven cloud services.
- Developed dashboards visualising churn drivers, risk segments, and revenue exposure.
- Impact: Customer retention analytics, CLV optimization, targeted intervention strategies

5. ArcelorMittal Production Data Engineering Pipeline |LINK **2024**
Python, Microsoft SQL, Power BI, Time-series Analysis, Process Engineering

- Analyzed production and downtime datasets to isolate operational bottlenecks.
- Built Power BI dashboards and ran statistical root-cause analysis of mechanical losses.
- Impact: Achieved 8% throughput increase and 5% reduction in unplanned downtime.

EDUCATION

University of Witwatersrand | Gauteng **2025**
Post Graduate Diploma: ***Data Science (Cum Laude)***

- Major: Machine Learning, Programming, Mathematical & Statistics for Data Science

University of Pretoria |Gauteng **2023**
BENG (Hons): ***Industrial and Systems Engineering***

- Major: Enterprise Engineering, Manufacturing Planning and Control, Optimization, Supply Chain Processes and Design

University of Pretoria | Gauteng **2016-2019**
BENG: ***Metallurgical Engineering and Materials Science***

- Major: Process Control, Python Programming, Extractive Metallurgy, Material Science

References upon request