UNARINE TIMOTHY TSHIMAUSWU

Data Scientist | ML Engineer | Data Analyst

Gauteng, South Africa | 082 580 4035 | timothytshimauswu@gmail.com|LinkedIn: utshimauswu | Portfolio: TimothyTshimauswu

PROFESSIONAL SUMMARY

Quantitative Data Scientist and Analytics professional with 5 years of engineering and analytics experience, including 3+ years delivering predictive models, risk analytics, and BI solutions across financial services and large-scale operations. Advanced skills in Python, SQL, Azure, Power BI, and production-grade machine learning systems, with extensive experience in transactional analytics and executive reporting. Proven impact contributing to R83M+ in cost savings, operational gains, and revenue retention, and seeking Data Scientist or ML Engineering roles in financial services, risk modelling, operations analytics, and business intelligence.

CORE COMPETENCIES

- **Programming & BI:** Python| SQL | R(time-series analysis) | Power BI (DAX, Executive dashboards, data visualizations)| Tableau | Advanced Excel (data analysis, financial modelling)| SAS (foundational ETL)
- **Machine Learning and Analytics:** Credit risk modeling | Predictive modeling (XGBoost, scikit-learn) | Time-Series Analysis | Regression Analysis | Customer segmentation and clustering | Feature engineering and model validation
- **Data & Cloud:** ETL Pipelines | SQL Server | Azure Data Factory | Databricks | AWS (EC2, S3) | Docker| Data Governance and regulatory compliance
- **Soft Skills:** Project Management | Business Acumen | Stakeholder Engagement | Problem Solving

PROFESSIONAL EXPERIENCE

Financial Data Analyst

Ruach Consulting Solutions| Consulting for an NGO Client   *December 2024 - Present*

- Developed comprehensive SQL-based data extraction and Power Query transformation workflows processing 50,000+ monthly NGO transactions to ensure accuracy and regulatory compliance.
- Built automated financial reporting models using Azure Data Factory Pipeline, SQL, and Power Query to streamline monthly reporting processes, reducing manual intervention from 40 to 20 hours.
- Prepared 12 executive-level Power BI dashboards for cash flow monitoring, expenditure tracking, and funding performance analysis, demonstrating strong analytical communication skills.
- Conducted variance analysis on R4.5M expenditure portfolios, identifying patterns and anomalies to support risk management initiatives and delivering recommendations projected to achieve R150K in annual savings

Process Engineer (Operations Data Analyst)

ArcelorMittal South Africa|Industrial Operations & Risk Management   *March 2022 - November 2024*

- Built an Azure data engineering pipeline (Data Factory, SQL Server, Power BI) processing over 250,000 monthly production records to ensure data accuracy and support strategic decision-making across a 504,000-tonne/year manufacturing plant.
- Developed automated analytical models with Azure Data Factory, SQL Server, and Python to enhance production tracking and operational reporting, decreasing manual work and boosting data quality.
- Performed advanced statistical analysis, including Pareto analysis, on over 80,000 operational events to identify six key bottlenecks. Cross-functional efforts led to an R38M increase in operating profit by improving throughput by 8% and reducing downtime by 5%.
- Conducted a time-series trend analysis on five years of extensive customer complaint data, pinpointing equipment failure patterns linked with maintenance schedules. The analytical insights helped implement corrective actions that preserved a customer account worth over R30M annually.
- Developed a regression-based optimization model analyzing energy consumption patterns for a 1.8M-tonne-per-year plant, identifying operational adjustments that achieved R15M in annual cost savings.
- Prepared monthly executive reports and operational dashboards presented directly to senior management, showcasing strong analytical communication and data visualization skills.

Graduate Engineer

ArcelorMittal South Africa|Operational Analytics and Process Optimisation   *March 2020 - February 2022*

- Optimized process control systems using statistical analysis on 50,000+ equipment records, contributing to R15M in mechanical-loss savings through improved efficiency and reduced unplanned downtime.
- Designed and implemented an end-to-end defect and quality analytics framework using SQL, Excel, and RCA, integrating multiple data sources. Collaborated with cross-functional teams and stakeholders to standardise controls and reporting, delivering a 10% reduction in end-product defects.

KEY ANALYTICS PROJECTS

Credit Default Risk Management System | Portfolio Project | [GitHub Repository](#)

Python | SQL | SAS | XGBoost | FastAPI | Streamlit | Power BI | AWS

- Built a production-ready credit risk analytics platform analysing 1M+ loan applications using XGBoost with 45 engineered features, including DTI, credit utilisation, and payment behaviour.
- Achieved 87% precision and 82% recall through hyperparameter tuning and 5-fold cross-validation.
- Deployed a FastAPI scoring service using Docker on AWS EC2 with logging, monitoring, and error handling, projecting a 15% reduction in bad debt versus baseline approval strategies.

ArcelorMittal Production Analytics & Azure Pipeline | Arcelor Mittal experience | [GitHub Repository](#)

Python | Azure Data Factory | SQL Server | Power BI | Statistical Analysis

- Designed and implemented an Azure Data Factory ETL pipeline processing 250,000+ monthly records for a high-volume manufacturing operation (504,000 tonnes/year).
- Performed Pareto and root cause analysis on 80,000+ downtime events using Power BI dashboards to identify critical bottlenecks.
- Analytics-supported initiatives delivered R38M in operating profit, driven by an 8% increase in throughput and a 5% decrease in downtime.

Call Center Performance Dashboard & Operational Analytics | Portfolio Project | [Tableau Public](#)

SQL | Tableau | Excel | Data Cleaning | Operational Analytics

- Analysed 5,000+ call centre interactions across 8 operational KPIs, including call volume, speed of answer, resolution rate, and agent productivity.
- Built interactive Tableau dashboards with time-based analysis and agent-level drill-downs for operational decision support.
- Identified staffing gaps and underperformance patterns, supporting interventions projected to deliver R1.5M annual cost savings.

UFood Marketing Campaign & Customer Segmentation | Portfolio Project | [GitHub Repository](#)

Python | Pandas | Scikit-learn | K-Means | Marketing Analytics | Statistical Analysis

- Conducted customer behaviour and segmentation analysis on 1,843 customers using 29 transactional and behavioural features.
- Applied K-Means clustering to identify 4 distinct segments, revealing an 8.8x variance in campaign response rates.
- Developed a targeted marketing strategy concentrating on the top 50% of customers generating 91% of revenue, projecting 3.4x improvement in campaign acceptance and 71% cost reduction.

EDUCATION

Post Graduate Diploma in Data Science (Cum Laude) | University of the Witwatersrand | 2025

- Specialization: Machine Learning, Programming (Python, R), Mathematical Foundations

BEng (Hons): Industrial and Systems Engineering | University of Pretoria | 2023

BEng: Metallurgical Engineering | University of Pretoria | 2019

References available upon request