

TIMOTHY TSHIMAUWU

Data Scientist

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PROFESSIONAL SUMMARY

Data Scientist with 5 years of experience delivering business intelligence and predictive analytics in financial and regulated environments. Strong expertise in Python, SQL, Power BI, and Azure data platforms, with end-to-end ownership from data modelling to production reporting. Proven ability to translate complex analytical outputs into decision-ready insights for finance, risk, and senior leadership teams, driving measurable commercial and operational outcomes.

CORE CAPABILITIES

Decision & Commercial Analytics: Customer Retention, Portfolio Performance, Risk Indicators, Cost Leakage Analysis, Pricing, And Optimization Support

Programming & Analytics: Python, SQL, R, Power BI (DAX), Tableau, Advanced Excel

Data Engineering & Cloud: Azure Data Factory, SQL Server, Databricks, AWS (EC2, S3), Docker, ETL pipelines, FAST API

Stakeholder & Decision Support: Executive Reporting, Model Interpretation, Business Translation, Cross-Functional Collaboration

PROFESSIONAL EXPERIENCE

Data Science Consultant, Ruach Consulting Solutions

December 2024 - Present

- Delivered end-to-end analytics solutions that transform financial and operational questions into BI systems and decision-ready insights for a non-profit organization.
- Designed and implemented production-grade SQL data models and Power BI reporting pipelines processing monthly transactions, improving transparency and audit readiness
- Automated management and donor reporting workflows using an Azure ETL pipeline, reducing reporting effort from 40 hours to 20 hours per month
- Performed anomaly analysis across R4.5M expenditure portfolios, identifying R150K in projected annual savings
- Partnered directly with finance, compliance, and leadership stakeholders to support governance and regulatory reporting

Process Engineer (Applied Operations Data Scientist), ArcelorMittal South Africa

March 2022 - November 2024

- Connected operations, finance, customers, and management teams, translating performance and cost questions into data-backed insights across a large-scale steel production facility.
- Designed Azure-based ETL pipelines using Azure Data Factory and SQL Server, processing 250,000+ monthly records and improving data reliability and accessibility for operational teams.
- Built Python- and SQL-based analytical models to support real-time performance monitoring, root-cause analysis, and decision support for production optimization.

- Analysed 3M+ process events over two years, identifying structural inefficiencies that improved throughput by 8%, reduced unplanned downtime by 5%, and delivered R38M in operating profit.
- Conducted time-series and anomaly analysis on 5 years of customer complaint data across six product categories, informing targeted interventions that preserved a R30M+ customer account.
- Developed regression-based energy optimization models utilizing Python and advanced statistical techniques to deliver R15M in annual cost savings.

Graduate Engineer (Analytics & Process Control), ArcelorMittal South Africa

March 2020 - February 2022

- Applied statistical analysis and Tableau-based data visualisation to equipment and process datasets, improving process stability, control, and operational visibility
- Delivered R8M in mechanical-loss savings through structured data analysis, performance monitoring, and Pareto-based preventative maintenance strategies.
- Designed an end-to-end defect and quality analytics framework using SQL and Excel, reducing end-product defects by 10% and improving customer satisfaction scores.

SELECTED ANALYTICS PROJECTS

Credit Default Risk Analytics Platform | Portfolio Project

Python, SQL, SAS, XGBoost, FastAPI, Streamlit, AWS | [GitHub](#)

- Built a production-ready credit risk scoring platform analysing 1M+ loan applications, translating borrower behavior into default risk indicators.
- Engineered 45 predictive features and achieved 87% precision and 82% recall, balancing predictive power with business interpretability.
- Deployed a containerized FastAPI scoring service on AWS EC2, projecting a 15% reduction in bad debt through improved decision support.

Production Analytics & Azure Data Pipeline | Industrial Case Study

Python, Azure Data Factory, SQL Server, Power BI | [GitHub](#)

- Designed scalable ETL pipelines processing 250,000+ monthly records to support performance and cost analytics.
- Delivered decision insights through bottleneck and Pareto analysis, contributing R38M in operating profit and a 5% capacity increase.

Customer Segmentation & Campaign Optimization | Portfolio Project

Python, Pandas, Scikit-learn | [GitHub](#)

- Conducted behavioral segmentation on 1,843 customers using transactional and engagement features.
- Identified 8.8× variance in campaign response rates across segments.
- Proposed targeted engagement strategies projecting 3.4× campaign acceptance improvement and 71% cost reduction.

EDUCATION

Postgraduate Diploma in Data Science | *University of the Witwatersrand* | **2025** | **Cum Laude**

BEng (Hons) Industrial & Systems Engineering | *University of Pretoria* | **2023**

BEng Metallurgical Engineering | *University of Pretoria* | **2019**