

## **Tshana Tumelo Konaite**

Data Scientist | Machine Learning Engineer | Quantitative Analyst

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### **Professional Summary**

Quantitative Data Scientist with a strong foundation in statistical modelling, machine learning, and data-driven decision support. Experienced in designing end-to-end analytics and ML systems, from data ingestion and exploratory analysis to model deployment and API-based delivery. Proven ability to lead proof-of-concept initiatives, translate business problems into analytical solutions, and deliver scalable, production-ready systems. Passionate about innovation, continuous learning, and applying advanced analytics to solve real-world problems.

### **Core Competencies**

- Data Analysis & Exploratory Data Analysis (EDA)
- Predictive Modelling & Model Evaluation
- Quantitative Analysis & Data-Driven Problem Solving
- CI/CD for Data & ML Systems
- Cloud-Native Analytics & Containerized Environments
- Python Analytics & Machine Learning Workflows
- End-to-End Analytics Pipelines (API, Database, Application Layers)
- Agile Analytics Delivery & Stakeholder Collaboration-
- Mentorship & Technical Leadership

### **Oxillium — Machine Learning Engineer (Dec 2025 – Present)**

- Built an AI-driven educational content platform for automated flashcard, summary, and quiz generation.
- Implemented RAG pipelines with document chunking, embeddings, and semantic retrieval.
- Developed FastAPI-based services for model inference and content delivery.
- Deployed containerized workflows and cloud-backed storage on AWS.

### **Huawei Technologies —Transmission Data Analyst (Feb 2021 – Nov 2025)**

- Analyzed large-scale transmission and geospatial datasets to track progress, risks, and performance of full-turnkey projects.
- Led proof-of-concept (POC) data projects, from problem definition and data exploration to validation of results and stakeholder sign-off
- Designed experimental data workflows to test new analytical approaches, automation tools, and reporting frameworks before production rollout.
- Managed project budgets and cost tracking, performing variance analysis and cost optimization using data-driven insights
- Built and maintained analytical dashboards and reports to communicate project status, KPIs, and data-driven insights to clients and senior stakeholders.
- Led data quality assurance processes by validating, reconciling, and auditing survey and engineering datasets from multiple subcontractors.
- Designed and optimized data workflows to integrate survey data, network designs, and planning outputs into centralized reporting structures.
- Applied statistical analysis to identify data inconsistencies, bottlenecks, and trends impacting project timelines and delivery.
- Automated recurring reporting and data-preparation tasks using scripting tools, significantly reducing manual effort and turnaround time.
- Collaborated with cross-functional teams (engineering, planning, project management) to translate business requirements into data solutions.



- Trained and mentored junior analysts on data cleaning, validation techniques, analytical best practices, and reusable reporting templates.
- Contributed standardized data templates and documentation that improved consistency and scalability across multiple projects.

### **Huawei Technologies — Junior Transmission Data Analyst (Dec 2019 – Jan 2021)**

- Collected, validated, and cleaned large geospatial and network planning datasets to support transmission analysis and infrastructure design.
- Designed and implemented ETL pipelines to ingest data from heterogeneous sources, ensuring consistency, accuracy, and traceability.
- Performed EDA to uncover trends, anomalies, and data gaps affecting planning and design decisions.
- Planned and architected transmission data solutions aligned with customer requirements, technical constraints, and project specifications.
- Supported senior analysts by producing structured datasets, visual summaries, and ad-hoc analytical insights for decision-making.

### **Education & Certifications**

- MSc in Computational & Applied Mathematics, University of the Witwatersrand (2021 – 2024)
- BSc (Hons) in Mathematical Science, University of the Witwatersrand (2019 – 2019)
- BSc in Computational & Applied Mathematics, University of the Witwatersrand (2016 – 2018)
- AWS Certified AI Practitioner — Oct 2025
- AWS Certified Machine Learning Engineer Associate — Jan 2026

### **Technical Skills**

Languages: Python, SQL

ML & Analytics: EDA, feature engineering, supervised learning, model evaluation

Cloud & MLOps: AWS, Docker, CI/CD pipelines with GitHub Actio

Data Engineering & APIs: ETL Pipelines, RESTful APIs(FastAPI, Flask)

Frameworks: Python data and ML stack (NumPy, Pandas, scikit-learn, TensorFlow)

Databases: MySQL, FAISS, Chroma

Project Tools: Git, GitHub

AI Tools: AI-assisted code generation, refactoring, and review

### **Attributes & Strengths**

- Strong problem-solving ability
- Proactive and adaptable
- Detail-oriented and analytical
- Committed to learning, mentoring, and continuous improvement

### **References**

Available upon request