Emmanuel Sifiso Nkosi

Data Scientist

✉ emmanuelnkossi@outlook.com 📞 +27 69 182 3052 📍 Pretoria 💼 LinkedIn

⌂ GitHub 🔗 Website

Professional Summary

Data Scientist and AI Engineer with real-world experience in data science, machine learning, AI engineering, and frontend development. Proven ability to extract insights from complex data, build ML models, and deploy full-stack applications in production environments.

Experience

Wits Enterprise (University of the Witwatersrand)   12/2024 – Present
                                                              Johannesburg
Data Scientist | AI Engineer

- Developing AI solutions leveraging LLMs, NLP, and Deep Learning to uncover patterns and analyze large-scale social media datasets and inform business decisions in telecommunications.

- Applying advanced unsupervised learning techniques such as UMAP for dimensionality reduction and HDBSCAN for clustering, combined with BERTopic, LLaMA2, and OpenAI models to extract, label, and interpret latent topics in unstructured datasets.

- Expanding into frontend engineering using Angular and React to productize internal tools.

- Integrating API endpoints provided by backend teams to connect frontend UI components to SQL Server via token-authenticated endpoints.

- Continuously integrating and deploying AI/ML features to a live application hosted on Azure Web Apps, in collaboration with backend and frontend teams as APIs and components evolve.

Telkom Corporate Centre   01/2024 – 12/2024
                                                              Pretoria(Centurion)
Junior Data Scientist (IoT & Digital Twin Focus)

- Worked on IoT-integrated Digital Twin proof-of-concepts for predictive maintenance and system monitoring.

- Simulated telemetry data using AWS IoT SiteWise and 3D motor models through TwinMaker.

- Trained and deployed ML models on AWS SageMaker and EC2 to analyze and forecast equipment conditions.

- Built real-time dashboards with Grafana using data stored in S3.

- Led interns through end-to-end acoustic-modeling and machine-learning projects, driving technical direction, model development, and applied ML practices.

BCX (Business Connexion)   01/2023 – 01/2023
Data Scientist Intern   Johannesburg
  - Built a Speech Sentiment Analysis system to monitor customer
    satisfaction and agent performance in call centers.
  - Performed data labeling, EDA, preprocessing (MFCCs, spectrograms), and
    augmentation.
  - Trained deep learning models including CNNs, RNNs, and Transformers;
    deployed and presented the project.

BP Printing   01/2022 – 01/2022
Graphic Designer / Production Operator   Johannesburg
  - Created print-ready designs using CorelDRAW for branding, signage, and
    promotional material.
  - Operated equipment including vinyl cutters, sublimation printers, heat
    presses, and laser cutters to prepare materials for tailoring and
    production.

Education

University of South Africa (UNISA)   2026 – 2026
HCert in Mathematics & Statistics
  Accepted for 2026 Start

IT Varsity   2025 – 2025
*National Certificate in Fullstack
Development NQF 5*

Explore AI   2023 – 2023
*HCert in IT Systems Development
(Specialization: Data Science)*

Vukuzame MST School   2019 – 2019
Matric Certificate in Science

Skills

Languages & Tools: Python, SQL, Angular, Node.js, Bash

Libraries & Frameworks: Pandas, NumPy, Scikit-learn, TensorFlow, PyTorch,
OpenAI, LangChain, React, Angular

ML & AI: Predictive Modeling, LLMs, RAG Pipelines, NLP, Deep Learning, CNNs,
RNNs, Transformers

Deployment & DevOps: AWS EC2, Azure Web Apps, Render (CI/CD), Vercel, GitHub
Pages, GitHub Actions

APIs & Databases: RESTful APIs, Swagger, SSMS (SQL Server), PostgreSQL,
Vector Database(Pinecone)

Additional

Driver's Licence:
  - Code: 10 (C1)
  - Status: *Valid & Up
    to Date*