

PHELELANI MKHIZE

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PROFESSIONAL SUMMARY

Versatile Data Scientist and Location Intelligence Specialist with 6+ years of experience building end-to-end data systems that cut across geospatial analysis, market feasibility, insurance risk, and product innovation. AWS-certified in Architecture and Machine Learning, FinOps-accredited, and fluent in both AWS and GCP ecosystems. I specialize in bridging exploratory analytics with product strategy, designing solutions that translate complexity into actionable insights—particularly in emerging markets, township economies, and urban planning. Whether working with spatial data, business logic, or field intelligence, I bring a systems-thinking mindset that enables me to architect tools, workflows, and insights that scale across industries.

PROFESSIONAL EXPERIENCE

Business Data Scientist (SME) | Timbuk2.ai

Remote | Oct 2024 – Present

- Serve as a hybrid product owner and data strategist identifying innovation opportunities across township retail, logistics, and geospatial data platforms.
- Drive mobility-data-powered product development using Uber’s H3 index and AWS-native tools like Athena (for querying millions of rows) and RDS (for scalable storage).
- Focus on use-case definition, exploration, and early validation using data science and pre-built and pre-trained models.
- Collaborate with engineering and design to translate insights into viable prototypes and MVPs.
- Built internal research systems for AI-powered catchments, economic clustering, and spaza shop viability.

Analyst – Risk Management (Group UW) | Santam Insurance

Cape Town | July 2023 – September 2024

- Led spatial exposure modeling and geo-risk profiling for group commercial underwriting.
- Integrated ArcGIS datasets with internal claim and asset data to support strategic underwriting decisions.
- Contributed to cross-disciplinary work linking actuarial, underwriting, and spatial insights.

Associate Analyst | Fernridge Solutions

Johannesburg | Aug 2021 – June 2023

- Provided location intelligence and business analytics for major South African retail chains.
- Developed and deployed dashboards, spatial workflows, and feasibility models using Power BI, Tableau, Alteryx, and SQL.
- Modeled mobility data using Uber's H3 index and AWS Athena to provide deep behavioral insights on consumer movement and retail trends.
- Delivered strategic network plans and store optimization analyses for key accounts like Nando's and Circle K.

Development Economist | Urban-Econ Development Economists

Pretoria | Jan 2020 – July 2021

- Conducted feasibility studies, catchment analysis, and property development insights using ArcGIS Pro, Excel, and Quantec EasyData.
- Delivered municipal and private sector reports covering land-use demand, infrastructure ROI, and market potential assessments.
- Developed GIS dashboards and static maps for investment evaluation and spatial transformation policies.

FEATURED PROJECTS & PORTFOLIO

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- **UrbanMind AI Zoning Agent** – Bedrock-powered zoning rule interpreter
- **Adidas Regional Dashboard** – Sales trend analysis and performance visualizations
- **Hotel Strategy BI** – Power BI dashboard for occupancy and visitor patterns

CERTIFICATIONS

- **AWS Certified Machine Learning Engineer – Associate** (*Mar 2025 – Mar 2028*)
- **AWS Certified Solutions Architect – Associate** (*Jan 2025 – Jan 2028*)
- **AWS Certified Cloud Practitioner** (*Dec 2024 – Dec 2027*)
- **AWS Partner: Cloud Economics Essentials** (*Oct 2024*)
- **AWS Partner: Technical Accredited** (*Oct 2024*)
- **FinOps Certified Practitioner** – FinOps Foundation
- **Google Data Analytics Professional Certificate** – Coursera (*Jan 2022*)
- **Esri: Spatial Data Science – The New Frontier** (*Jan 2022*)
- **McKinsey Forward Program** – McKinsey & Company
- **Power BI & SQL Bootcamps** – Udemy
- **Property Development & Investment** – University of Cape Town

EDUCATION

Master's in Urban & Regional Planning – University of the Free State
2019 - 2020 | Dean's Merit Bursary

BSc Honours in Spatial Planning – University of the Free State
2018

Bachelor of Science – University of the Free State
2014 - 2017 | Majoring in Geography, Geology

TECHNICAL STACK

Programming: Python (Pandas, GeoPandas, SAM), SQL, R

Cloud Platforms: AWS (S3, Athena, Lambda, RDS, Bedrock), GCP (BigQuery, Cloud Storage)

Geo & AI Tools: ArcGIS Pro, QGIS, MapboxGL, Leaflet, GDAL, Folium

BI/Analytics: Power BI, Tableau, Alteryx, Excel

Specialties: Location Intelligence, Product Discovery, Retail Strategy, GeoAI, Mobility Analysis, Exploratory Analytics