

SEABILWE P.L. TILODI

GIS Analyst

+ 27 79 473 5582 | seabilwetilodi@gmail.com | [linkedin_profile](#)

Profile

I am passionate about Geographic Information Systems (GIS) and Remote Sensing and how they transform raw data into actionable insights across industries like environmental conservation and urban planning. Skilled in spatial analysis, data modeling, cartography, and remote sensing, I work with tools such as QGIS, GeoServer, PostGIS, and GDAL/OGR to develop innovative geospatial solutions. My expertise extends to field data collection, cloud-based integration, and open-source GIS, with a strong focus on sustainability in areas like biodiversity, water management, and energy supply. I excel in problem-solving, project coordination, and communication, collaborating with academia, government, and civil society to drive impactful research and solutions. As an advocate for open-source GIS technology, I am committed to making geospatial data more accessible and continuously refining my skills to support meaningful projects.

Skills

- Spatial analysis & geoprocessing –
- GIS & Remote Sensing software proficiency
- Data acquisition, ETL & spatial database management
- Cartography & data visualization
- Coding & automation (Python, SQL)
- Project management & communication

Education

- **MSc in GIS and Remote Sensing**
University of the Witwatersrand
2019 - 2020
- **BSc(Hons) in Geography**
University of the Witwatersrand
2018

Working Experience

- **Head of Training**
Kartoza (Pty) Ltd | 2024 - Present
 - Design and deliver training programs, workshops, and webinars on geospatial software for clients and internal staff.
 - Develop training materials, user manuals, and online tutorials, ensuring they align with industry advancements.
 - Provide technical support and troubleshooting for geospatial software users.
 - Collaborate with software developers and project teams to stay updated on new features and system enhancements.
- **GIS Specilaist/GISc Technician**
Kartoza (Pty) Ltd | 2020 - 2024
 - Conducted spatial analysis, geoprocessing, and problem-solving using QGIS, GeoServer, PostGIS, and GDAL/OGR.
 - Managed data acquisition, ETL processes, spatial databases, and remote sensing workflows.
 - Developed GIS systems, automated workflows, and web mapping applications using Leaflet, OpenLayers, and GeoNode.
 - Designed cartographic products, maps, and data visualizations for various projects.
 - Provided training, technical support, and project coordination, including report writing and client collaboration.

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Education

• BSc Geological Science

University of the Witwatersrand

2015 - 2017

Certificates

DataCamp

- Beginner and intermediate Python
- Data Analysis in SQL

Organisations

- GISSA Member from 2020 - present
- SAGTA member from 2022 - present
- OSGeo 2022 [Charter Member](#)

Languages

- **English** – Proficient (Fluent in both written and spoken communication)
- **Setswana** – Native speaker
- **isiZulu** – Conversational proficiency
- **Sepedi** – Conversational and written proficiency

Working Experience

• GIS Research Assistant/ Intern

Gauteng City-Region | 2019 - 2020
Observatory

- Collected, cleaned, and managed historical mine datasets within the Gauteng City-Region.
- Georeferenced old mine and city maps to improve spatial analysis and historical mapping.
- Conducted research on mining impacts on the socio-economic landscape, contributing to informed decision-making.

• High School Geography Tutor

MS Tutors | 2018 - 2019

- Provided Geography tutoring for grades 10 and 11 at Orlando High School and Diepsloot.
- Delivered lessons with strong presentation and communication skills, offering student support in-person and via email.
- Assisted with logistical and administrative support for tutoring sessions.

Conferences and Presentations

- FOSS4G - Florence Italy - [Classroom GIS in South Africa](#)
- Presented the EMC and DCPR Training for government officials from different departments
- Southern African Geography Teacher's Association(SAGTA) - [Academic Conference June 2024](#) - Data collection for the Classroom
- Geospatial Data Management Trainer - [Energy Modelling Platform - Joint Global Training School | \(smr 3963\)](#)

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References

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Key Projects

Waterberg Biosphere Reserve - USAID Project (2020 – 2022, South Africa)

- Developed a Strategic Environmental Management Plan (SEMP) using GIS and remote sensing to assess biodiversity, climate resilience, and ecological infrastructure.
- Contributed to the expansion nomination of the Waterberg Biosphere Reserve.

Electronic Metadata Catalogue (EMC) & Data Capture Project Register (DCPR) – DALRRD (2022 – 2024, South Africa)

- Created a national metadata catalogue for SA Spatial Data Infrastructure (SASDI) to improve data accessibility and governance.
- Published and managed datasets via <https://catalogue.sasdi.gov.za>.

Sustainable Energy for All (SE4All) - Energy Modelling Platform (2024, Italy)

- Developed training content on energy modelling and geospatial data management.
- Delivered training for academics and professionals from developing countries in the energy sector.

Global & Regional Electrification & GIS Initiatives

- World Bank & KTH Projects – Supported global electrification platforms for Benin, Somalia, and Somaliland.
- SADC Groundwater Management Institute – Applied GIS for sustainable groundwater management.
- IGRAC - The Global Groundwater Information System (GGIS) – Contributed to global groundwater data initiatives.

Clean Cooking & Renewable Energy GIS Solutions

- Clean Cooking Alliance - Clean Cooking Explorer – Assisted in GIS-based analysis for clean cooking solutions.
- St. Lucia & Dominica Governments – Led FOSS GIS training and migration for national geospatial systems.