**Portfolio**

**Benard Okello - GIS Specialist**

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**Portfolio Overview**

**Introduction:**

Welcome to my portfolio! I am a seasoned GIS specialist with over seven years of experience in geospatial analysis, remote sensing, and environmental management. Throughout my career, I have led and contributed to various large-scale projects, utilizing cutting-edge GIS technologies and tools to provide critical data analysis and support decision-making. My expertise spans agricultural monitoring, infrastructure development, and data management, equipping me to deliver high-quality geospatial solutions tailored to diverse sectors.

**Key Projects**

1. **Mapping of Cane Fields for Kabras Sugar**

   - **Description:** Led a team of 70 mappers to collect and analyze geospatial data to update the agricultural database for Kabras Sugar. We utilized smartphones with GPS for field data collection, allowing us to gather precise information about cane field boundaries and farmer details, including phone numbers, IDs, and bank accounts.
   - **Skills Utilized:** Spatial analysis, real-time data management, team leadership, GIS data collection, database updates.
   - **Outcome:** Successfully updated the farmers' database and integrated it with a spatial web map. This innovation enabled real-time spatial analysis, allowing stakeholders to identify fields that

were mature and ready for harvest, thereby enhancing operational efficiency and decision-making.

2. **Kenyan Standard Gauge Railway Construction**

- **Description:** Played a crucial role in creating the fundamental GIS datasets needed for the construction of the Kenyan Standard Gauge Railway (SGR). This project involved mapping all features along the established corridor, developing detailed terrain models, and identifying key ecosystem areas affected by the railway's path.
- **Skills Utilized:** Terrain modeling, road network analysis, ecosystem mapping, data compilation, ArcGIS.
- **Outcome:** The GIS datasets developed were integral in facilitating the construction process, providing precise spatial insights that supported effective decision-making in infrastructure development. This work minimized potential disruptions to ecosystems and enhanced the project's sustainability.

- **Uganda Entebbe International Airport GIS Database Update**

  - **Description:** Tasked with the comprehensive update of the GIS database for Uganda's Entebbe International Airport. Utilized expertise in ArcGIS and AutoCAD to manage spatial data compilation, integrate new geospatial information, and create detailed maps.
  - **Skills Utilized:** ArcGIS, AutoCAD, spatial data compilation, database management.
  - **Outcome:** The updated GIS database significantly improved the accuracy and usability of spatial data for airport management, providing a reliable source of geospatial information for operational planning and infrastructure development.

3. **Environmental Monitoring and Conservation Projects**

- **Description:** Managed several GIS projects focusing on environmental monitoring and conservation efforts. Analyzed satellite imagery, conducted environmental data analysis, and developed geospatial solutions for monitoring changes in land use, vegetation, and ecosystems.
- **Skills Utilized:** Remote sensing, environmental data analysis, spatial data modeling, project management, QGIS.
- **Outcome:** Provided detailed spatial analysis and reports that supported sustainable environmental management practices, identifying key areas for conservation and guiding strategic environmental policies.

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**Technical Skills**

- **GIS Software:** ArcGIS Desktop, ArcGIS Pro, QGIS.

- **Mapping Tools:** 2D and 3D GIS Analysis, AutoCAD.
- **Data Management:** Geoserver, PostGIS, Postgres.
- **Remote Sensing:** Lidar processing, photogrammetry.
- **Mobile Data Collection Tools:** Kobo, Survey123, ODK, Q-Field, GPS, and RTK operation.

## Certifications

- GIS Specialization – University of California (Coursera).
- GIS Mapping and Spatial Analysis Specialization – University of Toronto (Coursera).
- Esri MOOC – Cartography, Spatial Analysis.

## Conclusion

I am always open to new opportunities and collaborations in the field of GIS and remote sensing. Please feel free to reach out to discuss potential projects or to learn more about my work.