Wycliff Kimutai

GIS Software Engineer

✉ kimutaiwycliff90@gmail.com 📞 +254716522948 📍 Nairobi, Kenya 🔗 Portfolio

PROFILE

Back in 2019, while working on a road upgrade project, I discovered a passion for geospatial data analysis and quality control. Since then, I've developed GIS desktop applications, conducted spatial analysis for renewable energy projects, and performed topographic surveys. Currently, as a Senior GIS Desktop Developer at Konza Silicon Company Limited, I focus on ensuring data quality and transforming complex data into actionable insights. In my free time, I enjoy automating geoprocessing tasks, contributing to open-source geospatial projects, and exploring advancements in data analytics. When not working with data, you can find me hiking, reading about tech trends, or spending time with family and friends.

EDUCATION

M.Sc. Data Analytics *KCA University*	01/2022 – present Nairobi, Kenya
Software Engineering *ALX*	02/2022 – 05/2023
B.Sc. Geomatics Engineering and Geospatial Information Systems *Jomo Kenyatta University of Agriculture and Technology* Grade: First Class Honours	09/2015 – 04/2021 Juja, Kenya
CCNA Routing and Switching *Cisco Networking Academy*	07/2017 – 01/2018

PROFESSIONAL EXPERIENCE

Senior GIS Desktop Developer & Front-End Developer
Konza Silicon Company Limited

09/2022 – present
Nairobi, Kenya

- *Front-End Developer (09/2023 – present)*
  - Transitioned to the front-end department to focus on web development using the Angular framework.
  - Designed and developed user interfaces for various web applications.
  - Collaborated with backend developers to integrate APIs and optimize performance.
  - Ensured responsive design and cross-browser compatibility for all web applications.
  - Implemented best practices in UI/UX to enhance user experience.
- *Senior GIS Desktop Developer (09/2022 – 09/2023)*
  - Developed and maintained high-quality GIS desktop applications for Windows and Linux.
  - Created QGIS plugins and wrote Python scripts for geoprocessing automation.
  - Conducted spatial data analysis using pandas and geopandas.
  - Built web applications and data dashboards using Python.
  - Managed, maintained, and rendered spatial data using Geoserver and POSTGIS.
  - Deployed applications using Docker Swarm, Kubernetes.
  - Developed web maps for data visualizations using folium and dash libraries.

Geospatial Engineer
Bell Power International

02/2022 – 09/2022
Nairobi, Kenya

- Conducted spatial analysis to identify optimal locations for renewable energy installations.
- Collected, managed, and analyzed spatial data to support project planning and monitoring.
- Utilized GIS to assess the environmental impact of proposed energy projects.
- Developed automated workflows to improve operational efficiency and data analysis accuracy.
- Implemented GIS solutions to optimize the planning and management of energy infrastructure.

Lead Surveyor   07/2021 – 02/2022
KAAD, Somalia   Puntland, Somalia
Project: Garaad-Galkayo-Tuurdibi road project. (309Kms)

- Successfully conducted topographic surveys and design reviews for highway construction.
- Established control points and benchmarks for accurate road construction using static survey techniques.
- Successfully mapped and analyzed terrain to identify potential challenges and opportunities.
- Ensured alignment with project timelines and milestones through efficient survey planning and execution.
- Implemented precise land surveys to establish boundaries and right-of-way considerations.
- Developed comprehensive survey reports to guide decision-making in the early stages of the road project.

Engineering Survey Intern   08/2019 – 02/2020
Kenya National Highways Authority (KeNHA)   Busia, Kenya
Project: Busia- Malaba road project.

- Assisted in conducting precise land surveys for road construction projects, contributing to accurate project planning.
- Collaborated with the surveying team to create detailed topographic assessments for road alignments.
- Contributed to the determination of boundaries, ensuring legal compliance in road project planning.
- Acquired hands-on experience in CAD applications, supporting the creation of road design layouts.
- Participated in data analysis tasks, providing valuable insights for decision-making in the road project.
- Engaged in the preparation of survey reports and documentation for project milestones.Levelling.

Engineering Survey Intern   07/2018 – 12/2018
Kenya Rural Roads Authority (KERRA)   Bomet, Kenya
Project: Road upgrade of Darajasita-Chebole-Dikirr road

- Design of road structures like culverts and bridges.
- Road design and alignment.
- Road Leveling.
- Topographical mapping.

PROJECTS

Virtual reference station (VRS) in Kenya   07/2020 – 12/2020
University Final Year Project

- Investigated and reported on the performance of the Kenyan VRS concept as an extension of the GPS Real-Time-Kinematic (RTK) survey technique to provide reliable information on accuracy, precision, and reliability.
- Assessed the reliability of the Muya VRS network through detailed testing of accuracy, precision, initialization times, and coverage extent. Collected and processed multiple measurements from test sites within, on, and outside the network.
- Demonstrated that the Muya VRS system is at least comparable to classic RTK in accuracy, precision, and initialization times, with greater robustness in coverage extents.
- Provided valuable insights for existing and potential GPS users, aiding informed decision-making in positioning activities.

SKILLS

Programming
Python, JavaScript, Django, Express, React, Angular, R, PyQt,

Surveying
Engineering Surveys, GPS RTK and Static Survey

Cloud
AWS (Amazon Web Services): Terraform, EC2, ECS, S3

Databases
MySQL, PostgreSQL, MongoDb

Technical Skills
ArcGIS, ArcGIS Pro, QGIS, Google Earth Engine, Geoserver, Kubernetes, ERDAS, AutoCAD, ENVI,

Soft
Time management, Communication, Adaptability, Attention to detail, Teamwork, Problem-solving

CERTIFICATES

- Foundations of Project Management ⬚
- Spatial Data Science: The New Frontier in Analytics ⬚
- Tools for Data Science ⬚
- Going Places with Spatial Analysis ⬚
- Introduction to Data Science in Python ⬚
- Cartography ⬚
- Python for Data Science, AI & Development ⬚
- Project Initiation: Starting a Successful Project ⬚

LANGUAGES

English	● ● ● ● ●	Swahili	● ● ● ● ●
French	● ● ○ ○ ○		

REFERENCES

Dr. Victor K. Boiyo, *Deputy Vice Chancellor*, USIU
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Mr. Amos Ngeno, *Senior Surveyor*, Witts Engineering Consultants
ngenoamos@gmail.com, +254714251078

Mr. Jeffrey Mwai, *Senior Frontend Engineer*, Konza Silicon Company Limited
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