

# DERRICK KOOME

WebGIS Developer | Geospatial Engineer

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## PROFESSIONAL SUMMARY

- Geospatial Engineer and WebGIS Developer with 8+ years of experience delivering enterprise GIS and WebGIS platforms for government, humanitarian, and infrastructure projects across East Africa.
- Expert in PostGIS, Leaflet, Python, and ArcGIS; builds scalable spatial systems supporting 20,000+ records and thousands of daily map interactions.
- Blend of field surveying leadership and full-stack GIS development, translating raw spatial data into actionable dashboards and decision tools.
- Co-written an industry book on geospatial projects published by Taylor and Francis and available on Amazon

## TECHNICAL SKILLS

- Languages: Python, JavaScript, PHP, SQL, HTML/CSS, jQuery, AJAX
- GIS & Web Mapping: PostGIS, Leaflet, QGIS, ArcGIS Pro/Online, Turf.js, ArcGIS Maps SDK
- Data & Analytics: GeoPandas, Pandas, Plotly, Folium, Jupyter
- Tools: Pix4D, Git, VS Code, PyCharm

## PROFESSIONAL EXPERIENCE

### Owner / Projects Lead – Cheswick Surveys | 2016–Present

- Led 25+ surveying and GIS projects including UAV mapping of 3+ km<sup>2</sup> sites, producing orthomosaics and DEMs used for engineering design and approvals.
- Designed and deployed spatial databases improving land record retrieval time by ~60%.
- Delivered software solutions and technical training to 40+ surveyors and engineers.

### GIS & Land Survey Consultant – SETAC Engineering Consultancy | 2021–2025

- Executed topographic surveys for FAO, UNICEF, and EU projects across 4 countries supporting irrigation, facilities, and coastal protection works.
- Produced engineering drawings and GIS layers used directly for rehabilitation of 100+ km of canals and public infrastructure.
- Managed field teams of up to 10 staff while maintaining on-time delivery in remote environments.

### Co-Founder – Corsmap | 2017–2021

- Architected a continental WebGIS portal mapping 250+ CORS stations across 28 African countries.
- Built backend PostgreSQL/PostGIS database and interactive dashboards, reducing station discovery time from hours to seconds.
- Supported researchers, surveyors, and GNSS providers with centralized real-time metadata access.

### **Survey Party Chief – Nile Surveys & Geo-solutions | 2014-2015**

- Supervised crews for large-scale cadastral and settlement surveys covering thousands of hectares for UNHCR and government programs.
- Delivered accurate control and topographic data that informed land allocation and infrastructure layout.

## **SELECTED PROJECTS**

- Groundwater WebGIS Portal: Built full-stack platform managing 21,000+ well records with CRUD editing, clustering, dashboards, and spatial analytics using Leaflet + PostGIS; supports national SDG-6 monitoring.
- Geospatial Analytics (Python): Processed 200+ years of climate and global COVID datasets; produced automated choropleths, heatmaps, and time-series visualizations.
- Urban Density Mapping: Developed hex-grid and animated maps with Turf.js and ArcGIS SDK for large city datasets.

## **EDUCATION & CERTIFICATIONS**

- BSc Geospatial Engineering – University of Nairobi
- Remote Pilot License (UAV)
- Professional coursework in Spatial Data Science, Web GIS, and Google Earth Engine