Oluwasola Oyinloye

Geospatial data scientist · Geospatial AI specialist

GIS · Remote sensing · Drone mapping · Geospatial AI

o.oyin1115@gmail.com
dexsholex.github.io
linkedin.com/in/oluwasola-oyinloye
github.com/Dexsholex
Lagos, Nigeria · WAT, UTC+1

I'm a geospatial data scientist and geospatial AI specialist in Lagos with five years of professional GIS and remote sensing work. I take on drone surveys in Nigeria, planned and flown in-house, and work remotely from satellite data for clients across Africa and beyond. Every result I deliver comes with how it was validated and the code that produced it.

SERVICES

- Geospatial AI and machine learning
- Drone mapping and photogrammetry
- Satellite remote sensing and earth observation
- EUDR geolocation and deforestation checks
- Location assessment and site selection
- GIS mapping and spatial analysis
- Flood, climate and environmental risk
- Web GIS development and dashboards
- Spatial databases and data engineering
- Training and capacity building

SELECTED WORK

Oil palm counting from aerial imagery

For a commercial oil palm plantation in West Africa: a YOLOv8 crown-detection pipeline that mapped 718,751 palms across 12,166.6 ha in 26 blocks. Overlapping deliveries were resolved so every hectare is counted once, removing 302,412 double counts. On held-out test tiles the model counted 519 palms against a hand count of 518.

GeoAID flood susceptibility, Amuwo-Odofin (Lagos)

An open model with a live dashboard: structural flood susceptibility, near-real-time rainfall and exposure of people, schools, clinics and roads. ROC-AUC about 0.798 on a random split and about 0.642 under spatial cross-validation, reported side by side.

Where to build next: connectivity siting for Nigeria

From Ookla speed tests, every populated square kilometre of Nigeria sorted by what it needs for broadband, and the clinics and schools that should host new sites. The first 100 sites reach 3.12 million people in rural gaps. DSN AI Bootcamp 2026.

SECTORS

Agriculture and plantations · Banking, insurance and agric lending · Energy and utilities · Oil, gas and mining · Real estate, construction and infrastructure · Transportation and logistics · Telecoms · Retail and consumer goods · Government and public sector · Healthcare · NGOs and international development · ESG, environment and climate · Education and research · Consultancies and engineering firms

WHERE

On site in Nigeria. Remote across Africa and worldwide.

WAYS TO WORK

Pilot · Project · Monitoring · Advisory and strategy · Training. Written scope for every engagement; NDA on request.

TOOLS

Programming and analysis: Python, SQL, Jupyter, pandas, NumPy, SciPy, statsmodels. **Machine learning and AI:** PyTorch, Ultralytics YOLOv8, scikit-learn, XGBoost, SHAP, OpenCV. **Earth observation:** Google Earth Engine, geemap, Sentinel-1 SAR, Sentinel-2, SRTM, CHIRPS, NASA GPM IMERG, ESA WorldCover, WorldPop. **GIS and spatial data:** QGIS, Google Earth Pro, PostGIS, GeoPandas, Rasterio, Shapely, PyProj, OpenStreetMap. **Drone mapping:** DJI Terra, Agisoft Metashape, WebODM / OpenDroneMap, GNSS ground control. **Dashboards and web maps:** Streamlit, Power BI, Plotly, Folium, Leaflet.

EDUCATION

- Master of Information Technology (MIT), AI specialisation, Miva Open University
- BSc Surveying and Geoinformatics, University of Ilorin

TEACHING AND RESEARCH

Taught Python for geospatial analysis to 1,500 people through seminars.
Preprint: Oyinloye, O. A. and Mustapha, I. O. (2026). GeoAID: An Explainable Geospatial Disaster Intelligence Framework for Urban Flood Risk in a Data-Poor Coastal Megacity. Preprints.org. doi.org/10.20944/preprints202609.1630.v1