

# JOSEPH MAINA

Nairobi, Kenya · josephthuha@gmail.com · +254792127575 · josephthuha.dev

## EDUCATION

---

**The Technical University of Kenya**  
B.SC Geospatial Engineering *GPA: 3.7*

Nairobi, Kenya  
Sep 2015 - Dec 2023 - Already Cleared

## WORK EXPERIENCE

---

**UNDP**  
*GIS Consultant*

Remote, Office in New York  
Dec 2022 - Present

- Developing machine learning models for mapping informal settlements
- Supporting the development of the backend and frontend services for GeoHUB, an one stop shop for Geospatial Data and Analytics for Policy makers
- Designing and developing the UNDP Data Futures Platform Backend Pipeline for SDG Indicator data retrieval, transformation and publishing to the Data Futures Platform
- Supporting the development of content for concept demonstrations and solutions to senior management, as well as the wider stakeholders
- Supporting the designing and developing technical specification for scalable and complex cloud based geospatial systems
- producing high-quality outputs for geospatial analysis and data management
- maintaining and continuously improving production data pipelines and associated software systems, development platforms and CI/CD environments

**UNDP**  
*GIS Intern*

Remote, Office location in New York  
Jan 2022 - Nov 2022

- responsible for developing GeoHub, an ecosystem of cloud based geospatial services and applications designed to support UNDP with informed insights in the context of SDG's
- Supporting SDGi GeoAnalytics, a team consisting of GIS engineers, software developers, interns and external consultants providing geospatial services and know how to the organization
- designing, building and testing front-end and backend geospatial software systems

## SKILLS

---

GIS and Web GIS systems design and implementation  
Geostatistics  
Spatial data engineering:  
Cartographic map production  
OGC services (WMS, WFS, WCS, WPS)  
Environmental information systems  
Remote Sensing  
Numerical computing  
Image processing and Machine Learning  
Design and architecture of cloud based geospatial systems  
GDAL, ArcGIS, GRASS GIS, QGIS, PostGIS, GeoTools, GEOS, matplotlib, cartopy, rasterio, Google Earth Engine  
Pandas, Scipy, Numpy, Pillow  
Django, Maplibre and Mapbox, Leaflet, MVT, COG, titiler, Svelte/Kit, Bulma CSS  
Python, JavaScript/Typescript, Java, Kotlin, Bash  
Microsoft Azure, Amazon Web Services, Google CloudPlatform, Docker, Kubernetes, Git and Github

## Referees

Ioan Ferencik  
GIS Scientist/Developer,  
UNDP  
ioan.ferencik@undp.org