**EMMANUEL KUFFOUR OSEI**

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**GitHub**: <https://github.com/ikuffourosei>

**Portfolio:** <https://ikuffourosei.github.io/>

**EDUCATION**

**Bachelor of Science in Geomatic Engineering** **Aug 2018 – Sep 2022**

Kwame Nkrumah University of Science and Technology (KNUST), Kumasi, Ghana

Thesis: Interactive Web Map of KNUST campus To Facilitate Navigation

Technologies: QGIS, JavaScript (Leaflet Library)

**RESEARCH EXPERIENCE**

**Building and Roads Research Institute (BRRI) – Kumasi, Ghana**

**Research Assistant (Supervisor: Ing. Mrs. Emmanuella A. Asamoah)**

(Nov 2022 – Oct 2023)

* Analysis of spatiotemporal distribution of traffic accidents to identify high-risk areas and times for implementing safety measures.
* Mapping and Visualization of accident data in a web map using Leaflet (Open-Source JavaScript Library) and QGIS to build the map, and using Google Earth Engine for extracting geographical data.
* Crash Prediction Models at Intersections of Multi-lane Highways using QGIS and Python.
* Assisted other divisions with their research by finding the research gaps in the “Affordable Housing Project in Ghana”.

**Department of Urban Roads (DUR) – Kumasi, Ghana**

**Intern (Supervisor: Ing. Mrs. Kennyworth Baaba Buckson)**

(Oct 2021 – Dec 2021**)**

* Assisted with the design and development of the ‘New Kumasi’ project using AutoCAD to facilitate better operations and efficiency of urban roads in Kumasi.
* Estimated the Annual Average Daily Traffic (AADT) to determine road capacities and design infrastructure that effectively accommodates the traffic volume.

**PROFESSIONAL EXPERIENCE**

**Joshob Construction Company Limited – Kumasi Ghana**

**Geomatic Engineer**

(Apr 2024 – Present)

* Horizontal and Vertical road Setting out
* Setting out drains and culverts.
* Establishing controls (benchmarks) for leveling and GPS works.
* Estimating cut/fill volumes of earthworks, concrete, and asphalt materials.

**TECHNICAL SKILLS**

* **GIS and Mapping:** Google Earth Engine, QGIS, ArcGIS/ArcMap
* **Data Analysis and Prediction:** Crash Data Analysis
* **Engineering and Surveying:** GPS, Leveling
* **Programming and Scripting:** Python,,HTML&CSS, JavaScript, Bash Scripting

**INTERESTS**

Artificial Intelligence and Machine Learning (AI/ML), Geographic Information Systems (GIS), Python Programming, Transportation Engineering

**CERTIFICATES**

* **Software Engineering (Online) – ALX Jul 2023 – Aug 2024**

*Key Skills*: Python Programming, Data Structures, Algorithms, Software Development Lifecycle, Bash Scripting and Automation, Testing, Database Management.