EMMANUEL KUFFOUR OSEI

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I am focused on addressing complex environmental issues to aid in governmental policy formation and enforcement. With proven research skills and relevant experience in GIS, Python Programming and spatial data analysis, I am confident I will succeed in graduate school to achieve my career goal.

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 INTERESTS

Geographic Information Science & Systems (GIS), Remote Sensing, Geospatial Data Visualization, Land Use Monitoring, Transportation and Urban Analytics.

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:** Python, Crash Data Analysis
- **Engineering and Surveying:** AutoCAD, GPS, Leveling

CERTIFICATES

- **Software Engineering (Online) – ALX**   **Jul 2023 – Aug 2024**
  Key Skills: Python Programming, Data Structures, Algorithms, Software Development Lifecycle, Bash Scripting and Automation, Testing.