

Janice Agyeiwaa Owusu

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Professional Summary

Geomatics professional with expertise in GIS, LiDAR processing, remote sensing, and spatial data analysis. Strong background in field surveying, GPS data collection, and geospatial database management. Proficient in ArcGIS Pro, QGIS, PostGIS, Python, R, and SQL. Passionate about leveraging spatial technology to address environmental challenges including illegal mining and land disputes in Ghana and beyond.

Education

Master of Geomatics for Environmental Management (MGEM) Vancouver, BC, Canada
University of British Columbia Expected April 2026
Capstone: Multi-temporal airborne LiDAR analysis of forest canopy gap dynamics (2012–2022) — Coursework: Remote Sensing, Spatial Statistics & Modeling, GIS for Environmental Management, Python & R Programming

Bachelor of Science, First Class Honours – Geomatic Engineering Kumasi, Ghana
Kwame Nkrumah University of Science and Technology (KNUST) August 2024
CGPA: 3.94/4.0 — Top 1% of 166 students — Thesis: Design and Implementation of a Campus Navigation System at KNUST

Professional Experience

Junior Intelligent Network Operations Analyst Accra, Ghana
Telecel Ghana – Intelligent Network Department Sept 2024 – July 2025

- Managed data quality control for telecommunications systems serving 6M+ subscribers
- Developed Python scripts (Paramiko, Pandas) to automate data collection and monitoring, improving efficiency of data management processes
- Processed Call Data Records (CDRs) for 7M+ subscribers using Kafka; contributed to ETL pipeline for customer loyalty platform
- Produced weekly technical reports analysing system performance data

Data Analyst Intern Missouri, USA (Remote)
Deep Metrics Inc. Oct 2022 – Dec 2022

- Processed large-scale datasets for computer vision and transportation analytics projects
- Conducted quality assurance on field-collected data and prepared annotated datasets for AI model training
- Contributed to model evaluation pipelines for detecting moving vehicles and pedestrians

Geomatic Engineering Intern Asamankese, Ghana
Town and Country Planning Department Oct 2021 – Dec 2021

- Conducted field surveys using GPS and total stations for cadastral mapping and boundary delineation
- Prepared site plans and technical drawings using AutoCAD for municipal planning and infrastructure projects
- Performed spatial analysis of land records to identify encroachment patterns and documentation gaps
- Integrated GPS field data into GIS databases and created maps for land-use planning

Projects & Research

Forest Canopy Gap Dynamics Analysis using Airborne LiDAR Dec 2025 – Feb 2026
University of British Columbia

- Processed multi-temporal airborne LiDAR point cloud data (2012–2022) to assess forest structure changes
- Created DEMs and Canopy Height Models using R-based geospatial analysis workflows and spatial statistics
- Conducted data quality control on remote sensing datasets and documented processing methodologies

Campus Navigation System

Kwame Nkrumah University of Science and Technology

May 2024 – Aug 2024

findmyclassroomknust.netlify.app

- Co-developed web-based GIS navigation application serving 85,000+ users with real-time routing capabilities
- Managed spatial database of building locations, road networks, and points of interest
- Conducted extensive GPS field data collection and integrated geocoded data into the system

Community Land Documentation & GPS Training Initiative

Town and Country Planning Department, Asamankese

Sept 2024

- Coordinated workshops training 100+ community members on GPS navigation and spatial data collection
- Created cadastral maps from field-collected GPS data to resolve approximately 10 reported land dispute cases

Technical Skills

- **GIS Software:** ArcGIS Pro, QGIS, ArcGIS Online, PostGIS, Leaflet, OpenLayers
- **Remote Sensing & LiDAR:** Airborne LiDAR processing, aerial imagery analysis, satellite imagery, DEM/CHM creation, Drone2Map
- **Programming:** Python (GDAL, GeoPandas, Pandas, Rasterio), R (spatial analysis), SQL, JavaScript
- **Database Management:** PostgreSQL, PostGIS, MongoDB, spatial databases, data quality control
- **Field Technologies:** GPS/GNSS, Total Stations, cadastral mapping, field data collection
- **Other Tools:** FME, AutoCAD, Git, Microsoft Office, LaTeX, Linux

Certifications

- ESRI Training: Geographic Information Systems, ArcGIS Pro, Remote Sensing (2025)
- FME Academy: Integrate Data with the FME Platform (2025)
- Innovation for African Universities Training – IAU (2023)

Awards & Leadership

- **Female Engineering Students Sponsorship Program** – Telecel Ghana (2024): Awarded to top 10 female engineering students across top 5 universities in Ghana
- **Best Student Award** – College of Engineering, KNUST (2023): Top scorer in a class of 154 students
- **Excellent Student Award** – College of Engineering, KNUST (2023): Awarded to students with CWA of 75 and above
- **Organizing Secretary**, Association of Geomatic Engineering Students (AGES) Programmers Club, KNUST (2023)