

ING. NANA EKOW NKWA SEY

Environmental Engineer | PhD Candidate | Ground Systems Manager

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PROFESSIONAL SUMMARY

Environmental engineer, researcher and Ground Systems Manager with experience in satellite ground stations, research infrastructure, Earth observation, UAV applications and geospatial data analysis. Principal Technician at the Earth Observation Research and Innovation Centre, University of Energy and Natural Resources, and a PhD Candidate in Environmental Engineering and Management. Applies Python, Google Earth Engine, machine learning and remote-sensing methods to wildfire research, environmental assessment and operational Earth-observation systems.

PROFESSIONAL EXPERIENCE

Ground Systems Manager (Principal Technician)

Earth Observation Research & Innovation Centre (EORIC), UENR Feb 2026 - present

- Coordinates operational support for satellite ground stations, servers, networks and research infrastructure.
- Provides technical support to research teams across equipment, software and data workflows.
- Supports training and applied projects in satellite systems, UAVs, Earth observation and programming.

Senior Technician / Ground Systems Manager

Earth Observation Research & Innovation Centre (EORIC), UENR Feb 2021 - Jan 2026

- Managed routine ground-station and research-infrastructure operations and maintenance.
- Supported COSMIC-2 functionality, server administration, backups, networking and technical troubleshooting.
- Provided practical support for research teams, students, interns and institutional projects.

Graduate Research Assistant (Contract)

Earth Observation Research & Innovation Centre (EORIC), UENR Jul 2017 - Feb 2021

- Analysed environmental and geospatial data using Python and Google Earth Engine.
- Acquired UAV imagery and supported photogrammetric and remote-sensing workflows.
- Contributed to literature reviews, research documentation and technical workshops.

SELECTED PROJECT EXPERIENCE

- Project Co-Lead for a professional satellite-communications certification programme.
- Contributed to the Advanced Virtual Fire Information System and related web/API workflows.
- Developed deep-learning applications for vegetation-hazard monitoring and rural-rooftop segmentation.
- Supported satellite antenna, GNSS, carbon-flux, UAV and engineering-prototyping projects.

EDUCATION

PhD in Environmental Engineering and Management

University of Energy and Natural Resources
Ongoing

Working thesis: From Pixels to Postcode: Building an Address-Level Wildfire-Susceptibility Framework for Ghana.

MSc in Environmental Engineering and Management

University of Energy and Natural Resources

2022

Best Thesis Award; ACE/RCEES scholarship.

BSc in Aerospace Engineering

Kwame Nkrumah University of Science and Technology

2016

Department of Mechanical Engineering; MASTESS scholarship.

PROFESSIONAL STANDING

- Professional Engineer (Mechanical), Engineering Council of Ghana, Ghana Institution of Engineering. Since 2020.

HONOURS

- Best Thesis Award, MSc Environmental Engineering and Management graduating group.
- Engineering Innovation Award, Ghana Institution of Engineering Branch 2.
- ACE/RCEES and MASTESS scholarships.

TECHNICAL SKILLS

Ground systems

Satellite ground stations, Linux, Windows servers, networks and technical maintenance.

Earth observation

Google Earth Engine, GIS, environmental monitoring and remote sensing.

Programming

Python, machine learning, deep learning, HTML and CSS.

UAV and engineering

Drone operations, Agisoft Metashape, CloudCompare and SolidWorks.

PROFILES

ORCID

Google Scholar

ResearchGate

LinkedIn

GitHub