

Augustine Maada Gbondo

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Skills & Interests

Environmental Assessment: Hydrogeology, Water Management, Environmental Engineering

Software and Tools:

Geoscience and GIS: GOCAD/SKUA (beginner), GeoDin (beginner), Google Earth Engine, ArcGIS products, Webmapping

Programming Languages and Frameworks: Python (Intermediate), R Programming (Beginner), HTML, css, Javascript

Data Science/Machine Learning: Machine Learning, Deep Learning, Geospatial Machine Learning

Libraries: TensorFlow, Keras (beginner), PyTorch (beginner), Scikit-learn, pandas, numpy, Geopandas

Database Management: MySQL (beginner), PostgreSQL/PostGIS.

Soft skills: Research, Technical Writing, team worker, good sense of humor, willingness to learn new tools and concepts.

Language: German (conversational), English (Mother tongue)

Interests: Football, gym

Education

Technische Universitaet Darmstadt

MSc., Tropical Hydro-geology and Environmental Engineering

Darmstadt, Hessen

2019 - 2023

Fourah Bay Colleye (University of Sierra Leone)

BSc., Geology

Mount Auroel, Freetown

2012 - 2016

Publication

Title : Authorship patterns in Africas groundwater literature: Indications for helicopter research?.

Published in Earth Science Reviews (Elsevier), 2024

Experience

Hessen State Agency for Nature Conservation, Environment and Geology (HLNUG)

Wiesbaden

Wissenschaftliche Mitarbeiter

07/2024 – Present

Project: 3D-Modellierung zum Forschungsthema Urbane Geologie bzw. Untergrundspeicher wasserstoff (Projektträger:HLNUG)

- Analysis of Uranium and radon measurements with nearby boreholes for 3D Modelling.
- Develop a concept to integrate 3D modelling with hydrogeological models
- Create custom apps with python to increase workplace efficiency

Wissenschaftliche Hilfskraft

08/2023 – 06/2024

- Analysis of expert reports, in HLNUG archiv to locate relevant reports for the Underground storage of hydrogen in Hessen.
- Develop a concept to integrate 3D modelling with hydrogeological models
- Automate workflows with python programming

OMDENA

New York, NY - Remote

Junior Machine Learning Engineer

04/2023 – Present

I collaborated on several projects using AI solutions for real world problems.

- Forecasting industrial CO2 using machine learning
ROLE: I was part of the research team to find suitable dataset for the project, used domain knowledge in data processing, and created a “Neural Prophet” forecasting model with an MAPE accuracy of 0.01
- Advanced weather forecasting with machine learning and Python
- ROLE: I developed a 30 days forecasting model of precipitation using LSTM with an accuracy of 92%, and also deployed the model on a streamlit app.
- Detecting microorganisms in water with deep learning
ROLE: I was part of the data and research team to search for suitable data, and I also lead the Presentation and documentation of the whole project for the next phase (mobile app development)
- Flood Guard: Integration of precipitation time series and GIS data for flood forecast in Bangladesh.
ROLE: I was part of the data and research team to perform literature review on 5 articles to identify suitable data, models and their performances for the project.

Morobe Development Foundation Inc.

Papua New Guinea - Remote

UN-Volunteer

03/2022 – 10/2022

Project: Using GIS and literature review to locate suitable areas for groundwater drilling

- Created maps for project area and delineate favorable zones for groundwater exploration to avoid saline intrusion.
- Contributed to the hydrogeology/hydrogeology section of the report.

aurecon-CEMMATS Group Ltd.

Kono, Sierra Leone

Supervision Consultant (District Project Engineer)

02/2016 – 07/2019

Role: District Project Engineer for the Rural Water Supply and Sanitation Project (a 34m Euro project)

- Conducted EIA and socio-economic evaluation of beneficiary communities for proposed construction sites of water facilities
- Worked with local technicians and designed work plans for effective construction supervision of over 400 water and sanitation facilities to benefit 300,000 people.
- Organise and attend status meetings, share status of the projects with project managers, contractors and other stakeholders in the project.
- Evaluation and valuation of works by contractors

Professional memberships

Omdena: Machine Learning Engineer

Sierra Leone Institution of Geoscientists: certified graduate member (membership = S/2016/0005)

International Association of Hydrogeologists: certified online member (membership = 143040)

International Water Association: certified young professional member (membership = 1628915)