

Alhassan Sahad

Columbia, Mo |+1(309)-433-7786 | as9zz@missouri.edu | [LinkedIn](#)

EXPERIENCE

University of Missouri, Columbia, MO

Research Assistant, Hydrology Lab

August 2022-Present

Physically Based and Data Driven Hydrologic Modeling for the Missouri River Basin

- Preparing input data for Hydrologic Model for the Missouri River Basin
- Built Web Scrapping code in Python for downloading and visualizing USGS Streamflow data
- Used remotely sensed data to assess the spatial and temporal variation of Precipitation over Missouri

Illinois State University, Normal, IL

Teaching and Research Assistant, Dept of Geology and Env.

August 2020-August 2022

- Used Random Forest ML algorithm for predicting streamflow at the outlet of the Sangamon Watershed in Illinois with an accuracy of 0.95
- Prepared input data for the prediction of water quality within watersheds in Illinois using ML
- Conducted a tracer test to quantify the travel time of tile diverted waters in Riparian Buffer Zone to be 27 days which corresponded to 43% reduction in nitrate
- Used GIS and Remote Sensing to delineate groundwater potential zones in the northern part of Ghana
- Taught labs for Principles in Geology to over 50 students

Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

Teaching and Research Assistant, Dept. of Geological Eng.

August 2019-August 2020

- Assisted in the teaching of courses such as Hydrogeology, Geophysics, and Computer Programming(MATLAB) to over a 100 students
- Assisted final year students in thesis research project

B Ali Geoconsult-Kumasi, Ghana

Internship

May 2018-September 2018

- Performed groundwater exploration using geoelectrical resistivity method for over 10 boreholes projects
- Developed a MATLAB code for analyzing groundwater exploration data which improved borehole success rate to 80%
- Conducted pumping test to ascertain aquifer properties for 20 boreholes
- Supervised the drilling of over 20 boreholes in the southern part of Ghana

SKILLS

Programming Languages: Python (Karas, Sklearn, NumPy, pandas, matplotlib), R,

Tools: SQL (PostgreSQL, MySQL), ArcGIS Pro, Google Earth Engine, ENVI, Git

Frameworks and Methods: Machine Learning (Deep Learning), Data wrangling and Visualization, Physically Based Hydrologic Modeling (SWAT, MODFLOW)

EDUCATION

- University of Missouri-Columbia: **PhD Informatics (Geoinformatics)** 2022-Present
- Illinois State University: **MSc Hydrogeology and GIS** 2022
- Kwame Nkrumah University of Science and Technology: **BSc Geological Engineering** 2019

ACHIEVEMENT AND HONOURS RECEIVED

- Geological Society of America student travel grant, 2021
- Outstanding research promise award-Masters in Hydrogeology program, ISU, 2021
- Graduate Teaching Assistant Fellowship, ISU, 2020

- Geological Society of America (GSA) care award, 2020
- Overall best graduating student, St. Charles Seminary Senior High School, 2014

CONFERENCE PRESENTATION

SAHAD, Alhassan., PETERSON, Eric., O'REILLY, Catherine M., SEYOUM, Wondwosen., HOBERG, Joseph Robert., SCHUKOW, Elijah John and TWAIT, Rick, 2021” Using A Tracer Test to Model the Transport and Fate of Nitrate in a Saturated Buffer Zone” Geological Society of America Annual Conference, Portland Oregon(presented-oral).