

SETH AYUMU

Edmonton, AB | sayumu@ualberta.ca | (780) 232-3037 | Portfolio: mrayumu.github.io

SUMMARY

Data science-focused petroleum engineering graduate with experience in data analysis, predictive modelling, and building end-to-end analytical workflows for real-world energy datasets. Skilled in Python, model development, validation, and pipeline automation. Adept at quickly learning new tools, solving ambiguous problems, and translating complex data into actionable insights.

CORE SKILLS

- Python, NumPy, Pandas, Scikit-learn, PyTorch, SQL, Power Bi, VBA
- Machine Learning: regression, classification, feature engineering, model evaluation, cross-validation
- Data engineering: ETL/ELT automations, building clean analytical pipelines
- Strong foundation in statistics, reservoir characterization & engineering, drilling engineering systems
- Excellent communication, documentation, and teamwork skills

EDUCATION

- Master of Engineering, Petroleum Engineering — University of Alberta (2023–2025)
- Bachelor of Science, Mechanical Engineering — University for Development Studies (2017–2021)

TECHNICAL PROJECT EXPERIENCE

Data-driven CO₂ EOR Performance & Geological Feature Analysis ([Published in SPE Journal](#))

- Developed a data-mining workflow analyzing production and injection data from 2,000+ wells.
- Built visualization models in python to identify predictors of CO₂ storage efficiency and underlying physical subsurface controls.
- Created automated Python pipelines for data cleaning, feature extraction, and trend analysis.
- Presented findings at SPE Canadian Energy Technology Conference (2025).

[Decline Curve Analysis \(DCA\) Web Tool](#) — Python, HTML/CSS/JavaScript, ETL/ELT Automation, Git

- Built and deployed a web-based DCA application to automate decline-curve evaluation using Arps models.
- Developed front-end UI (HTML/CSS) and backend analytical logic in Python.
- Implemented data ingestion, preprocessing, and visualization workflows.
- Deployed the application publicly using GitHub Pages, improving accessibility and reproducibility.

PREVIOUS WORK EXPERIENCE

Data Management Consultant (Ghana National Service Personnel)

Akuapem North Municipal Assembly, Ghana

October 2021 – August 2023

- Implemented an integrated data management system that improved permit processing accuracy by 90% and reduced service time tenfold.
- Led cross-functional collaboration between engineering, planning, and finance teams to develop systematic-driven workflows supporting local policy decisions.
- Produced actionable analytics reports that improved budget transparency and project delivery efficiency.

LEADERSHIP/ COMMUNITY ENGAGEMENT

Client Services Assistant (Canadian Red Cross volunteer)

October 2024–Present

- Built automated data-entry and manipulation templates, reducing manual processing time by 40% at the Edmonton HELP Depot.
- Cleaned, validated, and analyzed datasets to support reporting and casework.

President — DANSU Youth Movement (Ghana)

March 2019 –April 2021

- Led national initiatives in education and civic engagement impacting 5,000+ youth.
- Managed external partnerships and multi-team coordination

