Isaac Edem Adoboe

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EDUCATION

Memorial University of Newfoundland *Sept 2025 – Present*
Master of Science in Scientific Computing *St. John's, NL*
Continuing into thesis-based Scientific Computing masters following coursework-intensive Data Science masters.

Memorial University of Newfoundland *Sept 2024 – Aug 2025*
Masters in Data Science; GPA: 4.0; Fellow of the School of Gradrate Studies *St. John's, NL*

Kwame Nkrumah University of Science and Technology *Sept 2017 – Sept 2021*
Bachelor of Science in Electrical Engineering; GPA: 3.55/4.0 *Kumasi, Ghana*

EXPERIENCE

Technology Portfolio Support Analyst *Nov 2021 – July 2024*
Newmont Mining Corporation *Akyem Mine, Ghana*
Promoted from End User Support Analyst (Aug 2022) to Technology Portfolio Support Analyst supporting mining operations technology infrastructure and data systems

- **Data Automation & Analytics:** Built Python-based reporting pipeline automating Lenel security system data extraction and transformation for finance/HR stakeholders (Power BI dashboards). Replaced manual processes with scheduled delivery reducing turnaround from days to hours.
- **Technical Operations Support:** Led technical support for 900+ users across enterprise and mining-specific software (MineSight, Deswik, LIMS), achieving 95% first-contact resolution. Coordinated deployment of 8+ major IT infrastructure projects including LIMS modernization and workforce management systems.

Front-End Developer *Jan 2021 – Dec 2021*
Envision Digital Signage Network *Kumasi, Ghana*
Part-time web development role during final year of undergraduate studies, leading React-based application transformation

- **Web Application:** Developed responsive React application for digital signage management, contributing to 100% sales growth. Reduced page load times by 40% through code splitting and performance optimization.
- **Component Architecture:** Created reusable component libraries (dashboards, data visualizations, forms) using React Context API and custom hooks.

Electrical Engineering Intern *May 2020 – Aug 2020*
Volta River Authority *Akosombo, Ghana*
Summer internship supporting high-voltage electrical distribution systems for national power infrastructure

- **High-Voltage Systems:** Assisted maintenance and troubleshooting of 161kV and 330kV transmission lines ensuring continuous power delivery. Participated in preventive maintenance scheduling and fault analysis.
- **Power Distribution Analysis:** Processed load flow data and voltage profiles for distribution optimization studies, identifying system improvements and efficiency opportunities.

PROJECTS

Surrogate-Based Optimization for Molecular Configurations 🔗 *Spring 2025*
Developed machine learning surrogates for quantum chemistry calculations in protein-carbohydrate binding. Implemented global optimization algorithm across 24 molecular pairs with 16D feature space.

Fine-Tuned CodeGen Model 🔗 *Winter 2025*
Fine-tuned transformer-based CodeGen-350M on CodeSearchNet Python corpus using HuggingFace Transformers. Optimized training with GPU acceleration and evaluated using BLEU, CodeBLEU metrics for code completion quality.

Machine Learning-Based Fault Detection in Induction Motors 🔗 *2021*
Undergraduate thesis developing CNN architecture achieving 61.4% multi-class accuracy on motor fault classification. Processed motor current signals into time-frequency spectrograms with TensorFlow/Keras implementation.

SKILLS

Programming: Python (NumPy, pandas, matplotlib, scikit-learn, TensorFlow, Keras, PyTorch), R, SQL, Bash

Software & Tools: Jupyter, RStudio, Git/GitHub, Azure, MS Excel, Power BI