

DEREK NSOH AMUNA

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Data Portfolio: [Portfolio](#)

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Professional Summary

AI/ML Engineer specializing in the development, deployment, and security of machine learning systems. Proven ability to build and deploy scalable solutions from the ground up, integrating advanced models (like Deep RL and Generative AI) with cloud platforms (AWS, GCP) and MLOps tools (Docker, FastAPI, GitHub Actions). Eager to apply a strong foundation in data science and secure application development to build impactful, intelligent applications.

Technical Skills

- **AI/ML & LLMs:** Python, PyTorch, Scikit-Learn, Deep Reinforcement Learning, Retrieval-Augmented Generation (with haystack), Vector Databases
- **MLOps & Deployment:** Docker, FastAPI, GitHub Actions, Git, AWS, GCP, SQL, PostgreSQL
- **Data & Analysis:** R, Data Mining, Econometric Modelling, Financial and Statistical Analysis
- **Other:** Go, CUDA

AI/ML Engineering Projects

- [Pennyworth](#) (LLM Personal Assistant)
 - Developed Pennyworth (High-Recall RAG System): Engineered a context-aware retrieval system using Gemini API and Vertex AI. Built a custom RAG pipeline ensuring high-fidelity context injection to minimize hallucination in specialized queries.
- [Whisper Finetuning For Low Resource Ghanaian Languages](#)
 - Architected a full-stack fine-tuning pipeline for Ghanaian languages. Solved data scarcity issues by curating custom datasets and deploying via Modal for scalable, serverless inference.
- [Algorithmic Trading Bot](#)
 - Engineered an autonomous cryptocurrency trading agent using Deep Reinforcement Learning (PPO) with multiple neural architectures and dynamic, volatility-adjusted position sizing strategies.
- Others: [Heart Disease Data Visualisation](#)

Work Experience

Data Science & AI National Service Personnel at Really Great Tech Solution Ltd. (09/2024 – 09/2025)

- Developed and deployed ML models (e.g., classification, regression) using Scikit-Learn and FastAPI to serve predictions to a live web application.
- Managed the secure MLOps lifecycle for applications using AWS and GCP, ensuring scalable, resilient, and secure model deployment.
- Engineered automated Python data integrity pipelines to validate and clean diverse, sensitive datasets, ensuring a reliable foundation for model training.

Intern at Equatorial Coca-Cola Bottling Company (WAC) (08/2023 - 09/2023):

- Applied machine learning (regression) techniques to contribute to the annual budget and revenue growth plan.
- Conducted data analysis on SKU-level contribution margins and generated periodic sales performance reports.

Director at Themba Yinebo Limited Company (12/2021 - Present):

- Developed and implemented **ML regression models** to accurately **predict sales** and inform strategic planning.
- Conduct ongoing data and financial analysis to support analytics applications.

Education

University of Ghana – BA in Economics & Statistics (02/2025)

- Relevant Coursework: Statistical Computing, Econometrics, Macro- and Micro-economic analysis.

Certification

Financial Modelling & Valuation Analyst, **Corporate Finance Institute** [FMVA Certification](#)

Data Analyst and Scientist, **DataCamp** [Data Analyst Certification](#), [Data Scientist Certification](#)

AWS AI/ML Future AI Scientist, **Udacity** [AWS AI/ML Certificate](#)

Reference available upon request