Samuel Adetsi

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GitHub | Portfolio | LinkedIn

Summary

Data Science Master's graduate (UBC, '25) with 2+ years engineering experience building production systems for financial services. Proven track record deploying end-to-end solutions from data pipelines to predictive models and interactive dashboards.

Technical Skills

Languages: Python, SQL, R, C++, Java, JavaScript, Bash
ML & AI: Scikit-learn, TensorFlow, PyTorch, XGBoost, LangChain, OpenAI GPT, NLP, Time Series Forecasting
Data Engineering: PySpark, Airflow, dbt, Docker, ETL/ELT Pipelines
Cloud & Databases: AWS (S3, Lambda, EC2), PostgreSQL, MongoDB, Snowflake
MLOps & Tools: Git, CI/CD, FastAPI, Flask, MLflow, Dash, Streamlit, Plotly

Education

- **Master of Data Science** — Aug 2024 – Jun 2025
  University of British Columbia — *Vancouver, BC*
  ***Relevant Coursework**: Machine Learning, Deep Learning, Statistical Inference, Data Visualization*
- **Bachelor of Science in Information Technology** — Aug 2017 – Sep 2021
  University of Cape Coast — *Cape Coast, Ghana*

Professional Experience

- **Data Scientist** — Apr 2025 – Jun 2025
  Brilliant Automation – UBC Master's Capstone Partner — *Vancouver, BC*
  - Developed predictive maintenance ML system achieving 92% R^2 score, enabling proactive failure detection to minimize costly unplanned equipment downtime in mining operations
  - Built end-to-end automated data pipeline processing 17,000+ raw sensor readings daily, powering both ML predictions and real-time dashboard
  - Built an interactive Dash dashboard on AWS used daily by 6+ maintenance engineers for real-time equipment health monitoring, failure pattern analysis, and anomaly triage
- **Software Engineer** — Sep 2021 – Nov 2023
  turntabl (Technology Consultancy) — *Ghana & London, UK (Remote)*
  Consulting services for financial technology clients including Morgan Stanley and FINOS Foundation

  Morgan Stanley – Financial Data Engineering (Consultant) — *Jan 2022 – Jul 2023*
  - Automated data integrity validation across 15+ financial data streams using Python/Bash, reducing manual validation effort by 15+ hours monthly while maintaining 97% accuracy
  - Optimized high-performance C++ data processing infrastructure, achieving 15% throughput improvement and reducing latency by 150ms for real-time market data feeds
  - Performed statistical validation on time-series market data, improving data quality and reducing downstream analytics failures by 25%

  FINOS Foundation – Open Source FinTech (Consultant) — *Aug 2023 – Nov 2023*
  - Contributed production features to FINOS Perspective and Waltz open-source frameworks used by 10+ financial institutions including Goldman Sachs and JP Morgan
  - Enhanced C++ and JavaScript data visualization components, improving rendering performance for large financial datasets
  - Delivered features through CI/CD pipeline with comprehensive testing, collaborating with distributed open-source community

Projects

- **Financial Transaction RAG System** — GitHub
  - Built RAG application with LangChain and GPT-4 processing 100-200 transactions/second with sub-100ms query latency
  - Engineered PDF extraction pipeline with pdfplumber achieving automated semantic categorization across 10+ spending categories
  - Deployed dual-interface system (CLI + Streamlit) with FAISS vector search and interactive Plotly visualizations for natural language financial queries
- **AgroSense: Smart Agriculture Data Platform** — GitHub
  - Architected end-to-end Airflow pipeline orchestrating daily API and IoT sensor ingestion (10K+ readings) into PostgreSQL and Snowflake
  - Designed 15+ dbt SQL models across staging, intermediate, and mart layers with automated data quality testing
  - Built ML training dataset combining weather, multi-depth soil (pH, moisture), and crop yield data; trained Random Forest yield prediction model with MLflow tracking