

Dela Akpalu

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Summary

Data Scientist and Engineer with expertise in Python, SQL, and machine learning, passionate about transforming data into actionable insights. Proven ability to analyze complex datasets, build scalable tools, and collaborate cross-functionally. Adept at Agile methodologies, data visualization (Power BI, Tableau), and translating business needs into data-driven solutions

Technical Skills

- **Programming:** Python, SQL, SAS, R, C++, Julia
- **Machine Learning:** Predictive Modeling, Anomaly Detection and Recommender Systems
- **Data tools:** Power BI, Tableau, Matplotlib, Seaborn, REDCap, MySQL
- **Methodologies:** Agile, Data Mining, Statistical Modeling

Key Achievements

- Built a 90%-accurate ML model for patient activity prediction, reducing false positives by 18%
- Engineered a recommender system (Python/SQL) that cut query time by 30%
- Automated data cleaning pipelines in REDCap, significantly increasing efficiency and reproducibility of research workflows
- Built a hybrid machine learning model for nowcasting stock market movements by combining time series methods with neural networks

Work Experience

Research Assistant – Wake Forest University

Summer 2024 – Present

- Improved data quality and integrity in REDCap for efficient and reliable research data storage and retrieval
- Automated data cleaning and validation using R, reducing manual processing time and enhancing reproducibility
- Collaborated with cross-functional teams to structure and maintain large datasets for diverse research needs
- Performed data analysis to generate insights that supported key project decisions

Teaching Assistant – Wake Forest University

2023 – Present

- Tutored 50+ students in introductory statistics, improving average grades by 23%
- Provided timely and detailed feedback on assignments, improving learning outcomes and student engagement

Relevant Projects

Human Patient Activity Prediction – Machine Learning Model

August 2024 – December 2024

- Built a model to detect and predict patient activity in care homes with 90% accuracy
- Applied change point detection and segmentation to reduce false positives by 20%

Logistics Analytics & Recommender System

August 2024 – December 2024

- Built a user-based recommender pipeline using Python and SQL, reducing query time by 30%.
- Designed a real-time package tracking solution, increasing accuracy by 25%

Nowcasting Stock Markets with Machine Learning

February 2023 – April 2023

- Built a hybrid model combining vector autoregression and neural networks to nowcast stock movements
- Developed a Python pipeline for streamlined model deployment and reproducibility

Education

Wake Forest University – M.S. in Statistical Science

August 2023 – May 2025

- **Relevant Coursework:** Machine Learning, Database Management, Data Mining, Bayesian Statistics

African Institute for Mathematical Sciences – Structured Masters in Data Science

2022 – 2023

- **Relevant Coursework:** Computational Statistics, Reinforcement Learning, Big Data Analytics, Optimization Methods

Kwame Nkrumah University of Science and Technology – B.S. in Statistics

2016 – 2020

- **Relevant Coursework:** Statistical Learning, Regression Analysis, Stochastic Processes, Econometrics

Awards & Certifications

- **Data Science Certificate** - Department of Computer Science, Wake Forest University
- **Distinguished Teaching Assistant Award (2025)** – Department of Statistical Sciences, Wake Forest University