Kwabena Duffuor Asante

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PROFESSIONAL SUMMARY

Skilled data analyst with comprehensive knowledge of R and Python programming, statistical modeling, and machine learning techniques. Experienced in developing and implementing AI/ML solutions that have improved operational efficiency by 35% and prediction accuracy by 87% across research and government sectors. Skilled in predictive analytics, data visualization, and database management with practical experience implementing data-driven solutions. Strong collaborative mindset with proven ability to assess complex systems, solve problems logically, and communicate technical insights effectively.

SKILLS

- **Programming:** Python (Pandas, NumPy, Matplotlib), R, SQL (PostgreSQL, MySQL), Java, C++
- **Tools:** Power BI, Tableau, Excel (Pivot Tables, VLOOKUP), Google Sheets, TensorFlow, PyTorch, Keras
- **AI/ML Techniques:** Deep Learning, Natural Language Processing, Computer Vision, Ensemble Methods, Neural Networks, Anomaly Detection, Recommendation Systems
- **Concepts:** Data Cleaning, Visualization, Business Intelligence, Statistical Analysis, Machine Learning
- **Professional Competencies:** Analytical Thinking, Collaboration, Communication, Problem Solving, Knowledge Transfer

CERTIFICATION

Microsoft Certified Power BI Data Analyst Associate – Microsoft
July 2025

Certified SQL Specialist – University of Michigan
February 2025

Certified Tableau Data Analyst – University of California
February 2025

EDUCATION

MPS. INFORMATICS – Northeastern University, Toronto, ON, Canada
Expected: June 2026
Concentration: Analytics, Cloud Computing, IT Strategies, and Governance.

MPHIL. COMPUTER SCIENCE – University of Energy and Natural Resources, Sunyani, Ghana
December 2023
Focus: Machine learning, Software Engineering, and Advanced Operations Research.

BSC. INFORMATION TECHNOLOGY EDUCATION – University of Education, Winneba, Ghana
July 2020
Relevant courses: Calculus, Data Structures, Systems Analysis and Design.

WORK EXPERIENCE

RETAIL SPECIALIST (PART-TIME) – Freedom Mobile – Albion, Toronto, ON
August 2024 – Present

- Deliver tailored mobile solutions by analyzing customer usage data and identifying cost-effective plans.
- Implemented customer segmentation models using unsupervised learning techniques to identify high-value customer groups.
- Applied predictive analytics to forecast customer churn, enabling proactive retention strategies.
- Utilized recommendation systems to suggest optimal mobile plans based on usage patterns and customer preferences.
- Assisted in optimizing inventory levels by maintaining sales data reports and stock turnover analysis.
- Leveraged SQL to retrieve transactional data to understand consumer behavior and product demand.

RESEARCH & DATA ANALYST – UENR (Computer Science Dept) – Sunyani, GH
February 2022 - January 2024

- Conducted in-depth statistical analysis using Python (Pandas, NumPy) to support institutional research.
- Developed and deployed machine learning models using TensorFlow, PyTorch, and Keras to predict student enrollment patterns, achieving 87% accuracy and informing strategic planning decisions.
- Designed and implemented convolutional neural networks for gestational diabetes prediction, achieving 83% diagnostic accuracy to support early intervention and maternal healthcare decision-making.
- Applied natural language processing techniques to analyze research publications and identify emerging trends in computer science education.
- Implemented deep learning algorithms for automated data classification, reducing manual processing time by 45%.
- Built automated data pipelines for research datasets to minimize processing time by 35%.
- Prepared reports and executive summaries to present findings to faculty and research teams.

DATA ANALYST – Ghana Statistical Service – Accra, GH (Co-led, Remote)
June 2021 - September 2023

- Leveraged SQL and Python to identify data patterns and trends to support evidence-based policymaking.
- Applied machine learning algorithms, including random forests and neural networks, to predict infrastructure project outcomes and optimize resource allocation.
- Developed AI-powered anomaly detection systems to identify data quality issues in national surveys, improving data reliability by 25%.
- Created predictive models using ensemble methods to forecast demographic trends for policy planning.
- Created interactive dashboards using Tableau and Power BI to present survey findings for stakeholders.
- Led reporting template automation and conducted cost-effectiveness analysis for government infrastructure projects.

REFERENCE AVAILABLE UPON REQUEST