

# Frederick Opoku Afriyie

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## PROFESSIONAL SUMMARY

Computer Science MSc graduate with hands-on experience in software development, data analysis, machine learning, and AI systems. Skilled in building end-to-end software solutions, analysing complex datasets, and applying computational techniques to real-world problems. Combines strong technical foundations with an understanding of how systems interact with and affect users. Eager to contribute to a forward-thinking team working at the intersection of software engineering, data, and AI.

## CORE SKILLS

<b>Languages:</b>	Python • JavaScript • SQL • Java • TypeScript (developing)
<b>AI &amp; ML:</b>	Machine Learning • NLP & Text Analysis • Computer Vision • Model Evaluation • Random Forest • scikit-learn
<b>Data &amp; Analytics:</b>	Data Analysis • Regression & Statistical Modelling • Power BI • Tableau • Advanced Excel • EDA
<b>Web &amp; Software:</b>	Web Application Development • Software Architecture • Modular System Design • REST APIs
<b>Tools:</b>	Git & GitHub • VS Code • Relational Databases • Microsoft Azure (foundational)
<b>Research:</b>	Systematic Literature Analysis • Cross-Validation • Statistical Inference • Data Visualisation

## EDUCATION

### MSc Computer Science 2024 – 2025

*St Mary's University, Twickenham, London | Merit*

- Modules: Artificial Intelligence, Human-Computer Interaction, Software Design & Development, Web Application Development, Database Systems, Research Methods in Computing, Computer Networks
- Dissertation (Merit): Measuring the Impact of Digital Systems on Operational Efficiency in Residential Property Management applied Random Forest modelling, regression analysis, cross-validation, and time series analysis to 47 published case studies across North America, Europe, and Asia-Pacific markets

### BSc Information Technology 2019 – 2023

*University of Energy and Natural Resources, Ghana*

- Modules: Programming & Software Development, Database Systems, Data Structures & Algorithms, Information Systems, Computer Networks

## PROJECTS

### AI-Based Sign Language Recognition System 2024

- Built a computer vision prototype using machine learning to classify sign language gestures from labelled image datasets
- Applied image preprocessing pipelines, trained classification models, evaluated prediction accuracy, and iterated on model performance

Python • Computer Vision • Machine Learning • scikit-learn

### Web Application Development 2024–2025

- Designed and implemented a full-stack web application with front-end UI, back-end logic, and relational database integration
- Applied software engineering principles, including modular architecture, iterative development, and user-facing interface design

JavaScript • SQL • Web APIs • Software Architecture

### NLP & Text Analysis Project 2024–2025

- Applied natural language processing techniques to extract and analyse patterns from text datasets
- Explored LLM behaviour and computational approaches to language understanding

Python • NLP • Text Analysis • LLMs

### MSc Dissertation — Digital Systems Efficiency Analysis 2025

- Conducted systematic analysis of 47 international case studies using Random Forest, regression modelling, and time series analysis
- Developed a cross-validation framework and uncertainty quantification to assess model reliability across diverse data sources

Python • Random Forest • Statistical Modelling • Cross-Validation • Data Visualisation

### Data Visualisation & Analytics Dashboards 2023–2024

- Built interactive dashboards in Power BI and Tableau to transform complex datasets into accessible visual insights
- Power BI • Tableau • Advanced Excel • EDA

## EXPERIENCE

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### Freelance Web Developer

2024 – Present

*Self-employed • Remote*

- Designed and delivered full-stack web systems for commercial clients, including a hotel and a cleaning company, building customer-facing booking and enquiry platforms alongside staff management backends with receipt generation
- Built admin dashboards with live analytics, booking history, and activity tracking, giving managers real-time visibility across operations
- Managed full project lifecycle from client requirements and UX design through development, deployment, domain configuration, and professional email setup

### Sales Assistant (Part-time)

Oct 2025 – Present

*Children's World Fashion, at Fenwick, Kingston*

- Representing luxury brands including Kenzo, Hugo Boss, Timberland, and Michael Kors
- Delivering high-quality customer service in a fast-paced upmarket retail environment
- Managing product displays and supporting daily sales operations

### IT Support Assistant (Volunteer)

June 2025 – Present

*Staywell – Raleigh House, New Malden, United Kingdom*

- Provide technical support and troubleshoot IT issues for staff, improving digital accessibility across the organisation
- Document technical procedures and support onboarding of non-technical staff to digital systems

### Business & Administrative Support — National Service

Nov 2023 – Nov 2024

*Innovate Solutions Limited, Kumasi, Ghana*

- Managed data records, coordinated documentation, and supported digital reporting and operational tracking
- Contributed to information systems management in a fast-paced professional environment

## CERTIFICATIONS & CONTINUOUS DEVELOPMENT

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- Google Data Analytics Professional Certificate — in progress (Coursera)
- Actively developing skills in R, advanced statistical analysis, and TypeScript
- GitHub portfolio of development and research projects: [github.com/fredopoku](https://github.com/fredopoku)
- Foundation in Software Development — Ghana-India Kofi Annan Centre of Excellence in ICT

## ADDITIONAL INFORMATION

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- Right to work in the UK
- International background — experienced working across diverse cultural and organisational contexts
- Available for full-time and part-time roles from an immediate start

*References available upon request*