Mmesoma Nwachukwu

07404517459, mnfinance664@gmail.com , Portfolio website
Git hub profile, LinkedIn

RELEVANT EXPERIENCE

Head of Engineering   **Responsible AI Governance Initiative**   **Aug 2025-Present**
- Leading the technical direction and engineering efforts for a nonprofit focused on responsible AI development and governance.
- Managing a cross-functional engineering team to build open-source tools and frameworks aligned with ethical AI standards.
- Overseeing architecture and development of AI risk assessment platforms, compliance tooling, and data governance systems.

Data Science Year in Industry   **National Highways**   **July 2024-July 2025**
- Developed and tested AI models to solve complex business problems across various departments, optimizing operational efficiency and decision-making processes.
- Led development of two Machine Learning models:
    - A large language model (LLM) using knowledge graphs and Retrieval-Augmented Generation (RAG).
    - A computer vision model to remove weather conditions from CCTV images for clearer traffic analysis.
- Contributed as a Data Scientist in an agile team developing a geospatial segmentation model.
- Engineered and maintained high-quality datasets for model training and evaluation.
- Supported £5 billion infrastructure asset management through geospatial data insights.
- Engaged in stakeholder management, helping projects move through lifecycle stages by aligning business needs with technical execution.

AI Trainer   **Outlier AI**   **July 2024-May 2025**
- Trained generative AI models for code generation through problem-solving and output evaluation.
- Created functional test cases and provided technical feedback to improve AI-generated code
- Applied software engineering across Python, JavaScript, and C++ to develop next-gen coding tools.

Research Intern   **Imperial College London**   **June-July 2023**
- Collaborated in a cross-functional team to design sustainable solutions in energy and infrastructure.
- Prototyped data-driven technologies addressing climate resilience and scalability.
- Worked with researchers and industry mentors to assess impact and feasibility of innovations.

Software Engineering Intern   **Paradigm Finance**   **Sept-December 2021**
- Implementing and adhering to security best practices to safeguard sensitive financial data.
- Assisted with basic credit risk analysis by building tools to assess client portfolios and generate reports.
- Developed and maintained internal web applications.

EDUCATION

Coventry University | *Sept 2022 – May 2026*
BSc Computer Science – *Predicted First Class Honours*

Sixteen Plus Schools (Canadian Foundation – A-level Equivalent) | Sept 2020 – July 2021
- Distinction in Mathematics and Sciences
- Best Canadian Foundation Student

KEY PROJECTS

Image Verification SAAS product   **Founder**
- Developed an image recognition and verification model using convolutional neural networks
- Sold the system to clients for security system integrations.

ExcelPoint Web Application   **Founder**
- Creating an AI-powered web application for educational development and guidance.
- Integrating machine learning algorithms for career trajectory analysis.
- Using AI to help students understand their course materials better

LLM-Powered PDF Processing Tool   **National Highways – Sole Developer**
- Engineered a system using NLP, knowledge graphs, and RAG to extract insights from technical PDFs.
- Improved document query handling and boosted decision-making efficiency.

Deweathering Model for CCTV Footage   **National Highways – Sole Developer**
- Built a deep learning model to remove weather conditions from roadside CCTV images.
- Enhanced image clarity for traffic analysis and automated monitoring.

SCHOLARSHIPS AND AWARDS
- **Year in Industry Student of the Year –** National Highways *(1 of 10 selected from 400 participants)*
- **Santander Universities Scholarship –** Santander Bank *(1 of 100 nationwide)*
- **AWS Machine Learning Scholarship –** Top 2% of 50,000+ DeepRacer applicants
- **Best Canadian Foundation Student –** 16 Plus Schools
- **Intern of the Year –** Paradigm Finance

INDUSTRIES SKILLS AND CERTIFICATES

- **Languages & Frameworks:** Python, C++, JavaScript, HTML/CSS, Django, REST APIs
- **ML & Data Tools:** TensorFlow, PyTorch, NumPy, Pandas, R, Databricks
- **Databases:** PostgreSQL, pg4Admin, SQL, MongoDB
- **DevOps & Tools:** Git, VS Code, Jupyter,
- **Cloud & Big Data:** Databricks, AWS, Knowledge Graphs
- **Others:** Agile/Scrum, Project Management, Stakeholder Engagement

CERTIFICATIONS
- CISCO Networking Academy: Introduction to Networks
- Coursera - Convocational Neuro Networks

VOLUNTEERING
- **Coventry University Sports Society –** Football captain
- **Big Bang Fair Volunteer 2025**
- **Student Mentor –** Zero Gravity