

Mmesoma Nwachukwu

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RELEVANT EXPERIENCE

July 2024-July 2025

National Highways

Digital Services Year in Industry

- 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 one for LLM development with knowledge graphs and RAG, the other in Computer Vision to remove weather conditions.
- Played the data scientist role in an agile team where I made contributions in the development of a geospatial segmentation model.
- Designed, built, and maintained high-quality datasets, ensuring they are properly structured and pre-processed to facilitate accurate model training, validation, and performance monitoring.
- Collaborated with the geospatial team to support the management of £5 billion worth of critical infrastructure assets, contributing to data-driven insights that enhance asset management and long-term planning strategies.
- Involved with stakeholder management in my rotation in the business partnering making sure projects went through the development life cycle, by ensuring SME's and Project Managers have clear understanding on projects. My rotation also included reading business cases from different projects.

June 2024- May 2025

Outlier AI

AI Trainer

- Collaborated with teams to train generative AI models in code generation by solving complex coding challenges and evaluating model outputs.
- Assessed and improved AI-generated code through detailed analysis, functional test case creation, and technical feedback.
- Contributed to the development of next-gen coding tools by applying software engineering expertise across languages like Python, JavaScript, and C++.

June – July 2023

Imperial College London

Revolutions in Engineering

- Contributed to the design and development of sustainable engineering solutions as part of a cross-functional team within a research-driven environment.
- Applied engineering principles and data-driven approaches to prototype technology-driven solutions addressing real-world challenges in energy, infrastructure, and climate resilience.
- Collaborated with Imperial College researchers and industry mentors to assess feasibility, scalability, and impact of proposed innovations.

Sept– December 2021

Paradigm Finance

Software Engineering Intern

- Implementing and adhering to security best practices to safeguard sensitive financial data.
- Used Git for version control, track progress, and collaborate effectively with other team members.
- Led projects in website developments

EDUCATION

Sept 2022 – May 2026

Coventry University

BSc Computer Science

- Predicted First Class Honours

Sept 2020 to July 2021

16 Plus Schools

Canadian Foundation (A level Equivalent)

- Achieved **distinction** in Mathematics and Sciences
- Awarded **Best Canadian Foundation Student**

KEY PROJECTS

Image Verification SAAS product

Founder

- Developed an image recognition and verification model using convolutional neural networks and selling to clients for security systems.
- Implemented facial recognition capabilities with high accuracy rates.

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

- Built a system using Knowledge Graphs, NLP, and RAG to extract insights and answer queries from complex technical documents.
- Led the design and implementation to improve document searchability and decision-making workflows.

Deweathering Model for CCTV Footage

National Highways – Lead Developer

- Developed a deep learning model to detect and remove weather conditions (rain, fog, etc.) from roadside CCTV images.
- Enhanced image clarity for downstream traffic analysis and automated monitoring.

SCHOLARSHIPS AND AWARDS

Year in Industry Student of the Year – National Highways

- Selected as 1 of 10 awardees from a cohort of 400 early talent participants.

Santander Universities Scholarship – Santander Bank

- Awarded to one of 100 UK undergraduate students selected nationwide.

Machine Learning Scholarship – Amazon Web Services (AWS)

- Received a full-ride scholarship awarded to the top 2% of over 50,000 global applicants.

Best Canadian Foundation Student – 16 Plus Schools

- Recognised as the top-performing student across the Canadian foundation programme.

Intern of the Year – Paradigm Finance

- Recognised for exceptional contributions to web development at 17.

INDUSTRIES SKILLS AND CERTIFICATES

Technical Skills:

- Machine Learning: TensorFlow, PyTorch, NumPy
- Data Analysis: Python (Pandas, NumPy), R
- Big Data Tools: pg4Admin, Databricks
- Full Stack Development: Django, RESTful APIs, Python, C++, JavaScript, HTML, CSS
- Database Management: PostgreSQL, MongoDB, SQL
- Version Control & Deployment: Git, Databricks

Soft Skills:

- Agile Development
- Project Management: Four years of experience in managing technical projects across academic, personal and industry setting.
- Stakeholder engagement

Certifications:

- Imperial College - Revolutions in Engineering
- CISCO Networking Academy: Introduction to Networks
- Coursera - Convolutional Neuro Networks

VOLUNTEERING

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