

Kenneth Ikeagu

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 Work: (United Kingdom)

ABOUT ME

GenAI / MLOps Engineer with strong experience designing, deploying, and scaling large language model (LLM) systems and production-grade data pipelines. Deep expertise in MLOps, ETL, and cloud-native architectures on AWS, using Python to deliver reliable, compliant, and high-performance AI solutions. Proven collaborator with cross-functional teams, driving impactful machine learning systems from research to production.

WORK EXPERIENCE

 **Orchard Data Ltd.** – Edinburgh, United Kingdom

Gen AI/ML Engineer

[04/2025 – 12/2025]

1. Spearheaded the containerization of LLM-powered projects using Langchain & CrewAI LLM frameworks with AWS Elastic Container Service (ECS) & Elastic Kubernetes Service (EKS) for deployment.
2. Engineered and constructed ETL pipelines for batch data ingestion from multiple APIs into data warehouses such as AWS Redshift, automating ETL jobs with Apache Airflow running on AWS EC2 instances.
3. Delivered MLOps applications employing Amazon SageMaker training pipelines, MLflow for experiment tracking, and DVC for pipeline tracking.
4. Implemented MLOps solutions leveraging CI/CD with GitHub Actions, AWS, and Terraform.
5. Optimised existing production processes, enhancing code efficiency and query performance while adhering to data governance and security standards.

Key Technologies: AWS (Redshift, Athena, S3, EKS, ECS, Glue, SageMaker), Python, SQL, Airflow, Langchain, LlamaIndex, Vector Databases (ChromaDB & PineCone), CrewAI, Git, Linux, CI/CD (with Github Actions), IaC (Terraform), Kubernetes.

 **Heriot-Watt University** – Edinburgh, United Kingdom

Research Associate

[06/2024 – 03/2025]

1. Conceptualised new machine learning solutions for semantic communications (post-Shannon communications) based on image semantic segmentation.
2. Investigated and evaluated data-aided AI paradigms for wireless channel prediction and Intelligent Reflecting Surface-assisted communications.
3. Collaborated with data scientists and engineers to pinpoint data sources, define data and project requirements, and translate these into documented data artefacts.
4. Supported the supervision of 4th-Year B.Eng. machine learning projects in Semantic Communications within the EECE department.

Key Technologies: PyTorch, TensorFlow, Keras, Python (including Numpy, Pandas, Matplotlib, scikit-learn).

 **AI Community Africa** – Remote, United Kingdom

Data Science | Data Engineer Intern

[06/2022 – 05/2023]

1. Executed a customer churn analysis project showcasing advanced data analytics and machine learning skills.
2. Conducted systematic data analysis leveraging Python libraries including Pandas, NumPy, PySpark, and Matplotlib.
3. Applied data visualization techniques to reveal insightful trends.
4. Designed and constructed data ingestion pipelines from diverse sources into AWS Redshift, utilising Airflow and Dockerised ETL applications.
5. Developed and implemented robust, scalable data processing pipelines using Apache Spark on AWS EMR.

Key Technologies: PyTorch, TensorFlow, Keras, Python (including Numpy, Pandas, Matplotlib, scikit-learn), AWS, Docker, Kubernetes, Airflow.

EDUCATION AND TRAINING

PhD. Electrical Engineering

Heriot-Watt University [09/2020 – 06/2024]

City: Edinburgh | Country: United Kingdom | Field(s) of study: Machine Learning for Wireless Communication

MSc. Telecommunications and Wireless Systems

University of Liverpool [09/2018 – 09/2019]

City: Liverpool | Country: United Kingdom | Final grade: Distinction (79/100)

B.Eng. Electronic Engineering

University of Nigeria, Nsukka (UNN) [2010 – 2015]

Country: Nigeria | Final grade: First Class Honors (CGPA: 4.59/5.00)

RESEARCH INTERESTS

Machine Learning, Data Engineering, DevOps, Generative AI, Agentic AI Systems

SKILLS

Airflow / DevOps / Machine Learning Deployment (mlflow) / DVC / Cloud - AWS / Containerization (Docker, kubernetes) / MLOPS / CI/CD with Github Actions / Terraform / Observability (AWS Cloudwatch & Quicksight) / LLM Frameworks (LangChain, LlamaIndex, CrewAI, Agno & LangGraph) / Infrastructure Automation / Vector Databases (Pinecone & ChromaDB) / Problem Solving / Python (Numpy, Pandas, TensorFlow, PyTorch, PySpark) / Docker / Git

PROJECTS

MLOps Computer Vision Project Implemented an end-to-end computer vision MLOps project. The project involved implementing the ML pipelines (data preprocessing, model training, evaluation, and app building with Flask). It also involves pipeline tracking with DVC, experiment tracking with MLFlow, and model deployment with Docker, AWS, and Github Actions. [Github Link](#).

DataOps Project Implemented an end-to-end DataOps project with CI/CD, Terraform, and AWS. The project covers the essentials of integrating DevOps into Data Engineering workflows ranging from CI/CD strategies (with Github Actions), Infrastructure as code (with Terraform), and security scanning (with Trivy and Sonarqube). [Github Link](#)

LLMOPs Project Implemented a RAG-based Medical and Telecom Chatbot Built with LLMs, LangChain, Pinecone, Streamlit, AWS, and CI/CD (Github Actions). [Github Link](#)