Ahmad Ibrahim Ismail

Data Scientist | Artificial Intelligence Engineer

ibrahimahmadism@gmail.com +2348103317295 Lagos, Nigeria Ahmad Ibrahim olarsk

WORK EXPERIENCE

Data Science Nigeria, *Lead, AI for Digital Public Infrastructure* 07/2025 – Present | Lagos, Nigeria.

- Building EqualyzAI VoiceAgents, a multi-tenant, agentic voice-first AI infrastructure that enables enterprises, developers, governments, NGOs, and ecosystem partners to design, deploy, operate, and monetize voice-based AI agents at scale.
- Architected and built ARM enterprise co-pilot using multi-agent orchestration, hybrid RAG (pgvector + FTS + RRF + reranking), groundedness/claim verification, PostgreSQL RLS, and data pipelines processing 693k+ daily Customer records; implemented provider-agnostic inference within the client's Azure tenant.
- Proposed, designed and built ai-dpi-middleware, a model-agnostic AI gateway featuring RAG, structured extraction, STT/TTS, and 100+ language translation across 6 providers; with plug-and-play provider switching and a fully offline sovereign stack (Ollama/Weaviate) with enterprise JWT/OIDC security; to eliminate vendor lock-in for government/NGO/institutional deployments.
- Architected and built BridgeCore, a real-time voice and SMS translation backend for telcos enabling live Hausa ↔ Yoruba ↔ Igbo ↔ Pidgin bridging at scale; via concurrent ASR → translate → TTS pipeline over LiveKit Cloud, all built with sub-second end-to-end latency.
- Designed and built an MCP server bridging DiCert's credentialing platform to AI clients, allowing real-time tool calling to enable interactions with student profiles, reports, and assessments with performance analytics and personalized feedback for students, parents, and teachers; via Streamable HTTP and SSE endpoints.
- Led the customization and deployment of AIKano, an on-prem RAG system with full data sovereignty, multilingual (Hausa/English) query, OCR, voice agent, and cross-MDA analytics. Implemented tiered RBAC (Super Admin → MDA Admin → Staff), versioned document pipelines, and GPU-hosted LLM deployment for secure environments.
- Led the customization and deployment of LLMiner for AskKaduna, a retrieval-augmented generation (RAG) powered multilingual and multi-agent platform targeted aimed at answering any and all questions about Kaduna State aimed at boosting investment, tourism and citizen-government engagement in Kaduna State.
- Architected, designed and lead the development and deployment of the DSN Sandbox, a modular microservices platform exposing LLM APIs (Groq, OpenAI), KYC services (NIN, BVN, Liveness, credit score), Network services (USSD, SMS, Voice), Large scale datasets (SOCU, Grid3) and, Health facility registry). Implemented cloud-native DevOps stack (K8s, Prometheus/Grafana, OIDC, Redis, API Gateway) enabling rapid prototyping for innovators and startups.
- Contributed in the development of GenAIGov Platform based on the STANDARD-framework scoring engine with gamified badges, dynamic profiling, PDF reporting, and an LLM "Governance Coach."
- Architected and built Tattara AI-assisted multilingual and multimodal data entry (voice, OCR, NLP) and anomaly detection reducing manual entry time >40% and error rates >30%. Built dual-backend pipeline (DHIS2 API + SQL/NoSQL connectors) with offline-first storage, conflict resolution, and secure role-based workflows.

Data Science Nigeria, *Technical Team Lead* 05/2024 – 07//2025 | Lagos, Nigeria

- Led the development of LLMiner open-source-based AI-powered platform designed to empower government institutions and enterprises extract actionable insights from their internal data using soverign-owned Large Language Models (LLMs) deployed on-prem.
- Led and contributed to large-scale collection, web scraping, cleaning and processing of data across health and finance domains to build high-quality corpora for LLM training and evaluation.
- Led development of EdoDiDA Chatbot for natural-language interaction with DHIS2 data using AI-driven SQL and visualization agents.
- Led DHIS2 development, deployment, and operations, working with Edo State Digital Governance & Data Agency to design secure, scalable databases supporting multisector health data use.

- Owned end-to-end database lifecycle: requirements gathering, administration (backup, recovery, security, performance tuning), documentation, and ongoing technical support for users and developers.

Data Science Nigeria, *Data Scientist and ML Engineer* 08/2023 – 05/2024 | Lagos, Nigeria.

- Contributed to end-to-end development of AI/NLP-driven health and public-sector products, working across NLP modeling, software components, and data pipelines for RMNCHN and reproductive health use cases.
- Built and evaluated NLP pipelines (text classification, information extraction, embeddings) and supported early LLM-based workflows for African-language and health-domain data.
- Conducted applied research combining geospatial analysis and NLP/LLMs, resulting in two peer-reviewed papers accepted at ICLR 2024.
- Supported DHIS2-linked data analysis, data cleaning, and schema understanding to enable downstream analytics, dashboards, and AI systems.
- Completed intensive, hands-on training in Natural Language Processing, machine learning, and research engineering, progressing from experimentation to production-oriented development.

Bass Academic Help, *Data Scientist* 01/2022 – 08/2023 | Ilorin, Nigeria

- Delivered short-term data science, machine learning, and deep learning solutions for academic and research clients, covering data preprocessing, feature engineering, model development, and evaluation.
- Produced clear technical reports and research-grade documentation, translating complex analytical and AI results into actionable insights for non-technical stakeholders.

EDUCATION

Ahmadu Bello University, Zaria, Nigeria., *Master's in Public Health - Epidemiology (in view)* 09/2024 – Present

DataCamp, *ML DevOps, Natural Language Processing, Machine Learning, Data Analysis, Statistical Inference, A/B Testing* 2022 – 2023

University of Ilorin, Ilorin, Nigeria, *Bachelor Of Pharmacy* 2019

SKILLS

Python
Python Libraries: SciPy, Pandas, Numpy, Natural Language Toolkit, Matplotlib, and Seaborn
Python Framework: Flask, Django, and Rest API

DHIS2

Soft skills

- *Technical leadership and Cross-functional collaboration.*
- *Translate complex business logic into scalable code.*
- *Strategic thinking.*
- *Stakeholder management (government, NGOs, startups).*
- *Clear technical communication and documentation*
- *Mentorship & team guidance.*
- *Adaptability across domains (health, governance, DPI).*
- *Project lifecycle management.*

Agentic AI
Smolagents, LangGraph, CrewAI, LlamaIndex Agents, n8n, multi-agent systems, tool-calling, planners, memory, RAG agents (SQL, APIs, docs), pinecone.

Data Analysis, Visualization and storytelling
SQL, Microsoft Office Excel, Apache Superset, DHIS2 PowerBI

Artificial Intelligence and Machine Learning
Prompt Engineering and Prompt Template Design
Models: GPT, Qwen, Mistral, Llama, GPT, BERT, RoBERTa, T5, DistilBERT, multilingual-m5, NLLB
Libs: Llangchain, LlamaIndex, TensorFlow, PyTorch, Scikit-learn, Transformers, HuggingFace, OpenRouter, LiteLLM, ElevenLabs, Rasa

DevOps and Cloud Computing

- *AWS, Google Cloud (Vertex AI), Azure DevOps and Azure Machine Learning*
- *MLOps (DVC, MLflow), Streamlit, Gradio*
- *FastAPI, Flask, Django, RESTful APIs, GraphQL*
- *Docker, Kubernetes, CI/CD (GitHub Actions, GitLab CI)*
- *Git, Github*

Data Annotation and Data Quality Evaluation

PROFESSIONAL TRAININGS AND CERTIFICATIONS

- Agentic AI (2025)
- DHIS2 Advanced Training (November, 2024)
- DHIS Fundamentals (October, 2023)
- Machine Learning Scientist with Python (July, 2023)
- Data Scientist with Python (August, 2022)
- McKinsey Academy Forward Africa program (June, 2022)
- INASP MODULE Research Writing in the Sciences (2019, 2022)

AWARDS AND RECOGNITION

Project Delivery and Performance Award, *Data Science Nigeria* 12/2025
Awarded for exceptional project coordination and delivery of AI, DPI, and LLM-based solutions that achieved global recognition; demonstrated strong technical leadership with a cost-optimization mindset, rapid adoption of new platforms, accelerated delivery, continuous solution improvement, and internal capacity building, training over 20 staff on emerging DPI platforms.

1st Runner-up - e-Government Implementation Category 12/2025
13th Annual National Council on Communications, Innovation and Digital Economy (NCCIDE)
Ask-Kaduna received 1st Runner-up in the e-Government Implementation Category, in recognition of its impact on citizen engagement and government service delivery.

2nd Runner-up - Digital Technology and Human Development Category 12/2025
13th Annual National Council on Communications, Innovation and Digital Economy (NCCIDE)
LLMiner for Kano State, Nigeria, AIKano received 2nd Runner-up in the Digital Technology and Human Development Category, highlighting the effectiveness of AI-driven governance tools in strengthening digital services and institutional capacity.

Winner - Global hackathon for user-centric data sharing , *Center for Digital Public Infrastructure* 10/2025
- Awarded for outstanding submission, *EduCert by DiCert,* an AI-powered education credentialing and verification platform.
- Led the end-to-end development and architecture, guiding the project to success with a focus on optimized user experience, data-driven insights and AI integration.

Project Technical Leadership Award, *Data Science Nigeria* 12/2024
Awarded for full project ownership, extreme multi-tasking to deliver results with excellence, passion to go the extra mile, meeting extreme deadlines with minimal supervision, company-first mindset, team work, and the recognition of the contribution of others.

2nd Place - Data Hackathon and Community Initiative Contest 11/2023
Alliance against Antimicrobial Resistance. Team DataHealers - Geo-Targeting AMR: Harnessing GeoNLP for Enhanced Health Policy Interventions in Nigeria.
Proposed an innovative GeoNLP system designed to analyse and map AMR-related data with a specificity never before achieved in the Nigerian healthcare landscape. The solution tapped into real-time and historical data to provide a dynamic, visual understanding of AMR proliferation, informing policies that can adapt to the shifting patterns of antimicrobial use and resistance.

PUBLICATIONS

Retrieval-Augmented Generation Meets Local Languages for Improved Drug Information Access and Comprehension. 07/2025

Proceedings of the Sixth Workshop on African Natural Language Processing (AfricaNLP 2025) (pp. 108–114). Association for Computational Linguistics.

Leveraging Geo-NLP for Enhanced Antiretroviral Drug Distribution in Nigeria: Insights from Social Media and News Data 11/2024

Proceedings of the International Conference on Artificial Intelligence and Robotics (MIRG-ICAIR 2024) (pp. 13–21). Machine Intelligence Research Group (MIRG), University of Lagos.

Geo-Semantic Analysis of Medical Research Trends in Nigeria 11/2024

Proceedings of the International Conference on Artificial Intelligence and Robotics (MIRG-ICAIR 2024) (pp. 37–45). Machine Intelligence Research Group (MIRG), University of Lagos.