OLAIDE GABRIEL OLATOYE

AI/ML Engineer

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Live systems: knowtheblocks.org | cns.com.ng | aflon.edu.ng

PROFESSIONAL SUMMARY

AI/ML Engineer with 5+ years designing, training, and deploying machine learning systems across NLP, computer vision, reinforcement learning, and retrieval-augmented generation (RAG). Owns the full lifecycle from model research to deployed product, backed by strong full-stack and DevOps engineering. In 2025 and 2026, shipped AI assistants and ML systems into production EdTech platforms now serving 200+ active learners, part of a community that has trained 15,000+ students across 8+ partner schools. Published researcher with 5 peer-reviewed papers in machine learning and cybersecurity, integrating LLMs, vector databases, and real-time data pipelines into user-facing applications.

TECHNICAL SKILLS

ML Frameworks: PyTorch, TensorFlow, Keras, Scikit-learn, OpenCV, Streamlit, R

Techniques: CNNs, ANNs, Reinforcement Learning, NLP, RAG, embeddings, LLM integration, Multi-Modal LSTM, Fusion Attention

AI Infrastructure: LangChain, Ollama, Gemini APIs, OpenAI APIs, VectorDB (ChromaDB, Pinecone), FAISS, Hugging Face

Engineering: Python, TypeScript, Node.js, React/Next.js, Express.js, MongoDB, PostgreSQL

DevOps: Docker, Linux, CI/CD, Nginx, DigitalOcean, Google Cloud

PROFESSIONAL EXPERIENCE

AI/ML Engineer & Platform Lead | Know the Blocks Maven (KBM)

Remote | 2026 - Present

Professional training organisation delivering AI, Blockchain, and Web3 programmes across Nigeria.

- Implemented AI learning and navigation assistants across two production LMS instances (KBM and Wamido) on the Moodle 4.5 AI subsystem with OpenAI and Ollama backends, now serving 200+ active learners.
- Built an automated AI-powered lead-generation and learner re-engagement system supporting enrolment across a community of 500+ members and 15,000+ students trained across 8+ partner schools.
- Created and delivered structured course curricula for AI and blockchain training programmes.

Manager of AI/ML & Software Technologies | ACAIR (Aflon Centre for AI & Robotics)

Abuja | 2025 - Present

EdTech and AI research organisation building digital learning and smart-campus platforms.

- Built a facial-recognition attendance system (CNN, TensorFlow, OpenCV) for real-time student identity verification across campus.
- Developed NUCParser, an AI tutor that generates revision content, identifies focus areas, and produces adaptive assessment questions from Nigerian university curricula.
- Architected aflon.edu.ng, a smart-campus AI concierge (Next.js, Gemini APIs, RAG, VectorDB) for natural-language campus information retrieval, with 415 students enrolled and 69 active users.
- Integrated AI learning assistants (OpenAI and Ollama) into production Moodle LMS instances, including cns.com.ng (500+ active users), providing 24/7 in-course learner support.
- Led and mentored junior AI/ML engineers across model training, evaluation, and deployment workflows.

AI/ML & Full Stack Engineer | TeraAI

Remote | 2024 - 2025

AI-powered fintech startup building automated trading infrastructure.

- Architected an AI-powered trading platform integrating Reinforcement Learning, Multi-Modal LSTM, and Fusion Attention models for real-time financial signal generation.
- Built AI-driven trading signal engines and automated execution modules processing live market-data streams.
- Designed scalable backend APIs (Node.js, Express, MongoDB) for real-time market predictions and analytics dashboards.
- Implemented full-stack architecture (React, Next.js, TailwindCSS) enabling traders to interact with model outputs in real time.

AI/ML & Backend Engineer | Tayari.Live

Remote, Kenya | 2024 - 2025

EdTech platform connecting learners with tutors across East Africa.

- Built a RAG tutor recommendation system (VectorDB, Ollama embeddings, LangChain) matching learners to tutors by learning style, subject, and availability.
- Implemented an AI-powered course-content generation system leveraging LLM APIs for multi-modal educational support.
- Developed backend APIs with Node.js and TypeScript to integrate AI services into the platform frontend.

Academic Researcher | LAUTECH

Ogbomoso | 2020 - 2025

Research assistant and consultant in the Cybersecurity and AI department.

- Designed and implemented ML models for intrusion detection, health informatics, and decision-intelligence systems across multiple Master's and PhD research projects.
- Co-authored 5 peer-reviewed publications in machine learning and cybersecurity, focusing on ensemble methods and deep learning for threat detection.

SELECTED PROJECTS

- **MLGuard** - Network intrusion detection using Random Forest and XGBoost for real-time attack classification. Python (Flask), Scikit-learn. github.com/codewithgabriel/mlguard
- **Smart Buddy AI** - AI tutoring app with personalised learning, adaptive explanations, and RAG pipelines. Next.js, embeddings, VectorDB.
- **BrainWave** - AI-assisted platform that adapts curriculum based on learner performance. React, LangChain, Gemini APIs, VectorDB.
- **Facial Recognition Attendance System** - CNN-based real-time student verification. Python, TensorFlow, OpenCV, Streamlit.
- **AFLON AI Concierge** - Generative AI voice assistant for campus information retrieval. Next.js, Gemini APIs, RAG, VectorDB.
- Maintains 88 public repositories on GitHub (github.com/codewithgabriel) spanning machine learning, full-stack web, and blockchain.

EDUCATION

B.Sc. Computer Science, Ladoke Akintola University of Technology (LAUTECH) 2020 - 2025

- First Class Honours. Coursework and research spanning machine learning, algorithms, and software engineering.

CERTIFICATIONS

- **Linux Essentials** - Cisco Networking Academy. Issued October 2020. Credential ID f7e700cc-153d-4007-8868-1e7e3d7676e1.

RESEARCH & PUBLICATIONS

5 peer-reviewed publications in machine learning, cybersecurity, and blockchain (co-authored with academic supervision at LAUTECH):

- **Real-Time Intrusion Detection System Using PCA and Ensemble Machine Learning** - Advance Journal of Science, Engineering and Technology, 11(4), 2026. doi.org/10.5281/zenodo.19609503
- **Android Privacy Enhanced Document Sharing System using Blockchain and IPFS Technology** - IJIRCCE, 10(8), August 2022 (Impact Factor 8.165). doi.org/10.15680/IJIRCCE.2022.1008039
- **Deep Learning Applications and Challenges in Big Data Analytics: A Survey** - IJIRSET, 11(1), January 2022 (Impact Factor 7.569). doi.org/10.15680/IJIRSET.2022.1101126
- **State of Art in Message Delivery System using Blockchain Technology** - IJIRCCE, 9(8), August 2021 (Impact Factor 7.542). doi.org/10.15680/IJIRCCE.2021.0908049
- **Blockchain Based Document Management Systems in Information Security Age: Appraisal, Applications and Challenges** - IJIRSET, 10(7), July 2021 (first author, Impact Factor 7.569). doi.org/10.15680/IJIRSET.2021.100333