TIMILEHIN ADEDAYO

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Results-driven AI/ML Developer with demonstrated expertise in designing and deploying machine learning solutions, including fine-tuned Large Language Models, computer vision systems, and RAG pipelines. Proven track record leading technical teams and optimizing AI-powered features from conception to production. Skilled in Python, TensorFlow, PyTorch, and cloud technologies with a passion for solving complex problems through innovative AI applications.

EDUCATION

Babcock University   Ogun, Nigeria
B.Sc Computer Science   Expected Grad July 2026

Relevant Coursework: Database Management Systems, Discrete Mathematics, General Statistics, Statistical Methods I & II

TECHNICAL SKILLS

AI/ML Development: LLM Fine-tuning, RAG Architecture, Computer Vision, NLP, Fraud Detection, Prompt Engineering, Cypher (Neo4j).

Programming: Python (FastAPI, SQLAlchemy, Pydantic), JavaScript (React, Node.js), C, Java, SQL.

Tools: Neo4j Aura, PostgreSQL, Docker, TensorFlow, PyTorch, Scikit-Learn, GitHub, Vercel, Railway.

FEATURED PROJECTS

Babcock University Knowledge Graph Ecosystem   March 2026
- Engineered a production-grade RAG platform integrating LLMs with a Neo4j Knowledge Graph (10,000+ academic entities) for high-precision university data retrieval.
- Developed gdg-bu-kg, a published Python SDK with hybrid JWT authentication, reducing query latency by ~500ms and ensuring type-safe interaction.
- Designed a real-time "Command Center" UI using React/Vite and FastAPI, featuring comprehensive telemetry and audit-driven analytics.
- Implemented a dialect-aware database engine with automatic PostgreSQL/SQLite failover for robust production deployment.

Stack: Neo4j Aura, FastAPI, React, Python SDK (Pydantic v2), SQLAlchemy 2.0, PostgreSQL.

BRAIN (Breast Retrieval-Augmented Intelligence Network)   Oct 2025
- Developed an explainable AI system for cancer diagnosis using Swin Transformer (Swin-B) architecture, achieving 100% accuracy on a 4,916 image test set.
- Integrated a retrieval-augmented verification module using Facebook's FAISS library to cross-check predictions against a 24,000+ image knowledge base.
- Utilized Grad-CAM++ and Attention Rollout to provide visual heatmaps of pathological features for transparent clinical decision support.

Stack: Python, PyTorch, FAISS, FastAPI, React, Grad-CAM++.

Fine-tuned Dolphin LLM (Safety Research)   Oct 2025
- Performed memory-efficient fine-tuning on large models to test the effects of LLMs without guardrails in a university setting.
- Optimized data alignment prioritizing honesty and directness for accurate instruction-following using PEFT and Transformers.

Stack: Python, PyTorch, HF (PEFT, Transformers, Accelerate).

AI Job Skill Analyzer 2025

- Developed an AI-powered system to analyze job descriptions and map required skills to candidate profiles using NLP techniques.

Stack: Python, NLP, FastAPI.

CaseBud │ Team Project May 2025

- Worked in a team of three to tackle SDG 16 by developing a legal chatbot with 100+ users.

Stack: Python, AI/ML (NLP), Web Technologies.

Owltech │ Wema Hackathon Oct 2025

- Automated security tool to detect high-risk "Shadow IT" apps and malicious URLs.
- Developed a FastAPI microservice aggregating real-time data from 5+ external security APIs.

Stack: Python, FastAPI, Docker, Render, HF Inference API.

EXPERIENCE

AI Team Lead Jan 2025 – Present

Owltech Lagos, Nigeria

- Optimized RAG pipelines reducing hallucinations in customer-facing chatbots.
- Led 3-person team in end-to-end delivery of AI-powered features to production.

Tech: TensorFlow, Keras, PyTorch, Scikit-learn

Information Technology Intern Jan – Jun 2025

International Institute of Tropical Agriculture On-Site

- Built custom CNNs with TensorFlow/Keras for crop pest identification and classification.
- Developed classification systems using Random Forests/SVMs for soil moisture categorization.
- Engineered Python automation scripts for ICT tasks and ELK Stack deployment (Logstash, Kibana) with Grafana.

Tech: Python, TensorFlow, Keras, Scikit-learn, ELK Stack.

LEADERSHIP & VOLUNTEERING

GDG Babcock University │ Project Manager Sep 2025 – Present

- Lead the developer team in executing complex AI projects, including the University Knowledge Graph.

GDG Babcock University │ Data & AI Track Lead Sep 2025 – Present

- Organize and host technical training sessions for ML careers, engaging 100+ students.

Babcock University 25th Anniversary Hackathon Winner October 2025

- Awarded first place for "BRAIN", an AI-powered diagnostic network for breast cancer retrieval.

Babcock University Computer Club Dev Team Member Nov 2025 – Present

TRAINING & CERTIFICATION

- NVIDIA: [Building RAG Agents with LLMs](), [Fundamentals of Accelerated Data Science](), [Fundamentals of Deep Learning]()
- COURSERA: [Neural Networks and Deep Learning]()
- ZERO TO MASTERY: [TensorFlow for Deep Learning]()
- UDEMY: [Data Structures Using Python](), [Complete AI, ML and Data Science Bootcamp]()