

Adeniyi Olaitan Lekan

Systems Engineer & Full-Stack Architect

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EDUCATION

OBAFEMI AWOLOWO UNIVERSITY, ILE-IFE

Nigeria

Bachelor of Science in Agricultural and Environmental Engineering

July 2025

Grade: First Class

Meta

Coursera

Backend Engineering Professional Certificate

2023

Udacity

Remote

ALX-T Full Stack Developer Nanodegree Program

2022

PROFESSIONAL EXPERIENCE

PEEPALYTICS, AI

Remote

CTO (Founding Engineer)

June 2024

- **Orchestrated high-performance API workflows** using Django and FastAPI, integrating robust backend specifications with Next.js frontend controller logic for complex data visualizations.
- **Supervised the optimization of Airflow and Kafka pipelines**, achieving a 60x reduction in processing time and significantly decreasing memory consumption.
- **Engineered a 98.7% reduction in data processing latency**, slashing Neo4j and Pandas execution times from 2 hours down to 90 seconds.
- **Directed the deployment and scaling of cloud infrastructure** across AWS (Lambda, EC2, ECR, S3) and Render, utilizing Docker for containerization.
- **Optimized cloud expenditure** by monitoring service metrics and implementing a usage-based tiering system to reduce deployment costs.
- **Architected advanced AI solutions**, including RAG implementations with Vector Databases and ETL pipelines for the Model Context Protocol (MCP).
- **Managed a polyglot database environment**, ensuring high availability and performance across Postgres, Neo4j, Weaviate, and Time-series databases.
- **Developed and integrated intelligent automation bots** for Slack and WhatsApp using AWS Bedrock and SageMaker.
- **Doubled team collaboration efficiency** and ensured 99.9% service reliability by resolving critical development blockers and deployment bugs.

STEALTH NETWORK, WEB3

Remote

Frontend Engineer

Mar 2023 - Oct 2024

- **Transformed complex wireframes and designs** into high-fidelity, interactive web interfaces with a focus on intuitive user experience.
- **Engineered fluid, responsive layouts** ensuring seamless functionality and visual consistency across all device types and screen resolutions.
- Optimized front-end performance, implementing best practices in asset loading and rendering to significantly enhance page speed and responsiveness.
- **Architected a library of reusable UI components**, promoting code modularity, long-term maintainability, and accelerated development cycles.

STITCH TECHNOLOGIES

Full stack Engineer

Remote

Mar 2022 - Sept 2023

- **AI-Driven Social Automation:** Designed and built intelligent bots for Twitter and Discord by seamlessly integrating sophisticated social network APIs with backend logic in order to automate user interactions.
- **Scalable Sweepstake Ecosystem Development:** Designed and managed a sweepstakes system with heavy traffic using the Django framework, incorporating effective database designs to sustain activity from a huge number of participants.
- **Engineered Identity & Access Management (IAM):** Developed and implemented secure IAM functionality with Flask, creating a structured authentication and authorization framework to safeguard confidential user information.
- **Improved Data Security & Cryptography:** Implemented industry-standard hashing and encryption algorithms to protect data both at rest and in transit, meeting audit requirements.
- **Automated Multi-Stage Workflows:** Created complex automated workflows using tools such as Selenium, Celery, and Redis, using CronJobs to remove the need for any manual operations in the system.
- **Cloud-Native Orchestration:** Containerized microservices through Docker and Kubernetes, along with orchestration for quick deployment and ability to achieve high availability through AWS infrastructure.

MAJESTIK LTD

Programming Tutor

Remote

Oct 2021 - July 2023

- Mentored peers and students in C and Java, breaking down complex low-level concepts like memory management, pointers, and Object-Oriented Programming (OOP) to build strong computer science foundations.
- Instructed on Database Design and Architecture (MySQL), teaching the principles of schema normalization, SQL optimization, and relational data modeling to ensure efficient backend performance.
- Delivered full-stack development curriculum (Python, PHP), guiding learners from basic syntax to building functional web applications, emphasizing clean code practices and system integration.

ENGINEERING INNOVATION & SOFTWARE SYSTEMS

- **Fleet Logistics Engine (EagleSight):** Developed a strategic enhancement for the **Tractor-on-the-Go** ecosystem, using Linear & Mixed-Integer Programming (MIP) to solve Vehicle Routing Problems (VRP) and minimize fuel costs. Integrated a Fluid Mechanics-based diagnostic model that correlates real-time location with telemetry data to predict engine breakdown and prevent failure during operation. Preview at eaglesight.deniyi.link
- **Logistics & Multi-Agent Routing Engine (Locus):** Architected a distributed AI system using Google's ADK to coordinate 7 specialized agents for real-time pathfinding and environmental analysis, demonstrating the capacity to build autonomous dispatch systems for optimized fleet allocation. Preview at Locus

AWARDS AND CERTIFICATIONS

Overall Best Graduating Student: Department of Agricultural and Environmental Engineering

2025

National Level E-Quiz on Python (Score: 75%)

Aug 2020

University of Kerala (Certificate ID 8GCDYS-CE000297)

Understanding Renewable Energy

Oct 2019

YALI Africa

TECHNICAL SKILLS

- **AutoCAD Design:** Orthographic and isometric projections, design of bolts and nuts, chamfering and filleting of edges, thread representation, bearings, piping, and structural components.
- **Arduino:** Drone Technology, Arduino IDE, Protheus, Sensors (Water level, PIR and Flame sensor)
- **Safety, Health & Environment (SHE):** Effluent Treatment, Air, Water and Noise Monitoring, ATEX Zone Testing, Fire Extinguisher Servicing, Safety Induction Training.
- **Programming & Development:** Python, JavaScript, C, Java and C++ **Databases:** PostgreSQL, Neo4j, Vector Databases.
- **AI & Machine Learning:** Retrieval-Augmented Generation (RAG), AWS Bedrock, SageMaker, Multi-Agent Systems.
- **Data Engineering:** ETL pipelines, Model Context Protocol (MCP), Automation (Celery, Redis, CronJobs, Selenium)
- **Operations Research:** (Linear Programming, MIP, VRP), **Engineering Simulation:** (Orbital Mechanics, Fluid Dynamics)