

OLORUNDARE MICHEAL BABAWALE

SOFTWARE DEVELOPER

CONTACT

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PROFESIONAL SUMMARY

Versatile Full-Stack & AI Systems Architect with proven expertise in designing, deploying, and optimizing scalable intelligent systems across web, mobile, and distributed environments. Adept at architecting secure, modular backends with FastAPI, emphasizing clean API design, reliable data flow, and extensible microservices.

Deeply skilled in AI integration, model fine-tuning, and prompt engineering, with hands-on experience adapting LLMs to domain-specific use cases through structured datasets and context-aware pipelines. Experienced in autonomous agent design, Model Context Protocol (MCP) experimentation, and embedding reasoning capabilities into real-world products.

Passionate about building ethical, human-centered, and open-source technology, from intelligent agent frameworks to offline-first cooperative systems. Dedicated to advancing responsible AI adoption and leveraging automation to empower organizations and underserved communities.

SKILLS

Professional Skills

- AI Integration & LLM-Driven Systems
- Model Fine-Tuning & Prompt Engineering
- Full-Stack & Cross-Platform Development (Web, Desktop, Mobile)
- Software Architecture & System Design
- RESTful API Engineering (FastAPI)
- Distributed & Offline-First Applications
- Database Modeling & Optimization (SQL/NoSQL)
- Authentication & Role-Based Access Control

EXPERIENCE

Voice-First Learning Assistant (Prototype) | 2025 (In Progress)

Goal: Architecting and developing an integrated, cross-platform learning ecosystem that delivers personalized, accessible educational content to visually impaired students, leveraging a Hybrid deployment model.

- **Full-Stack Hybrid Architecture:** Designed and led the development of a Four-Component, Cross-Platform learning system. This includes student clients on both Reflex (Web, online only) and KivyMD (Mobile, hybrid offline/online), a centralized FastAPI REST API for secure data synchronization, and a Web-based Admin Dashboard for teacher content management and analytics tracking.
- **AI Engine Optimization & Localization:** Engineered a high-performance, localized voice engine within the mobile client. Utilized a Hybrid STT architecture (Google Cloud Speech-to-Text en-NG with Faster-Whisper fallback) to achieve 95%+ accuracy.

Core Competencies

- Analytical Problem-Solving
- Scalable Software Planning
- Ethical AI Design
- Technical Communication
- Team Collaboration & Mentorship
- Creative Innovation
- Continuous Learning & Adaptability

accuracy on Nigerian accents, ensuring reliable operation regardless of network availability.

- **System Configurability & Resilience:** Improved maintainability and deployment by centralizing system parameters in a YAML-based configuration and building an interactive VAD Tuner. This tooling allows real-time tuning of six VAD parameters to maximize system resilience and noise filtering across diverse student environments.
- **Concurrency & User Experience:** Implemented Non-blocking TTS (Piper-TTS) via background threading on the mobile client, which ensures continuous, low-latency voice recognition during system speech, eliminating conversational delays and preventing self-listening loops.
- **Technologies:** Python, FastAPI (API Server), Reflex (Web UI), KivyMD (Mobile UI), Faster-Whisper, Piper-TTS, Concurrency.

EDUCATION

University Of Ilorin

2015 - 2019

BSc. Statistics

QRive – Verified Digital Hubs via QR Codes | 2025 (Ongoing)

Architected a Full-Stack (FastAPI backend powering a Reflex-based SaaS) platform that verifies business identities through dynamic QR codes. Implemented AI-powered content validation, trust scoring, and QR metadata intelligence. Enabled secure verification of social links and payment details for fraud prevention.

LANGUAGE

- ENGLISH (Fluent)
- YORUBA (Native)

GITHUB URL

<https://github.com/Evayoung>

LINKEDIN URL

<https://linkedin.com/in/micheal-olorundare>

TrueTag Product Authentication Backend | 2025

Built a production-grade FastAPI server for a Start up authenticity platform. The backend mints unique blockchain tokens for manufacturers, tracks QR scan events, and detects reuse or tampering. Designed fraud detection logic that maps scan geolocation and prevents duplicate verifications, ensuring authenticity for each product.

BackendForge – Multi-Agent FastAPI Backend Builder | 2025 (Ongoing)

Developed an experimental backend generator driven by 18 collaborating AI agents, each assigned specialized roles in API schema generation, route design, documentation, and validation. The system uses a multi-agent orchestration layer to plan, code, and test FastAPI services autonomously, demonstrating scalable agentic backend automation.

Deeper Christian Life Ministry, Kwara State | 2024–Present

Designed and maintain a scalable church data platform powering two mobile apps and a REST API across state branches. Built with FastAPI, KivyMD, and PostgreSQL, the system enables gender- and age-based attendance tracking, newcomer registration, and data analytics. Implemented custom RBAC and reporting logic, ensuring secure access and real-time visibility across all levels.

Customized Bootable Linux Image for Youyeetoo X1 Device | 2025

Engineered a lightweight Ubuntu-based image with autologin, embedded PyQt6 GUI, and persistent path configuration for the Youyeetoo X1 device. Resolved boot-loop issues and optimized startup via systemd. Delivered a production-ready, fallback-friendly OS image tested on actual hardware.

Secure Image-Based Steganography System | 2025

Developed *Stego*, a Full-Stack PySide6 GUI for image-based steganography using a hybrid DCT-LSB technique and AES-256 encryption. Supported embedding and extraction of text and documents with high fidelity and robustness, successfully defended as a final-year project.

Clinic Management System – University of Ilorin | 2025

Developed a digital clinic management solution that replaced manual records with secure digital health profiles and QR-card access. Architected a Full-Stack system with role-based dashboards for students, doctors, pharmacists and Admin. Optimized for performance and efficiency.

Web-Based Thrift Contribution Management System | 2025

Built a two-part cooperative management solution with a FastAPI REST backend and Reflex frontend. Enabled digital group savings, payment scheduling via Paystack, and automated withdrawal rotation. Implemented dynamic contribution calculations, ensuring fairness and transparency across users.

Fingerprint-Based Access Control & Attendance System – CBT Centers, University of Ilorin | 2024–2025

Designed a biometric attendance platform authenticating students via fingerprint templates. Built the backend in FastAPI and admin UI in Reflex, implementing role-based permissions and fallback verification. Enhanced exam security and reduced impersonation cases.

Teaching & Mentorship | 2023–Present

Tutor on SuperProf and Certmart, teaching Python, software development, and web systems. Designed tailored learning plans emphasizing practical coding, architecture thinking, and AI literacy.