

Senior Software Engineer · Systems & Platform Architecture ·
Applied AI

EMMANUEL MOBOLAJI ARO

Lagos, Nigeria · Open to Global Remote / Relocation

+234 907 331 8795
emmanuelaro87@gmail.com
linkedin/emmanuel-aro
github/i-MMANTECH
emmanuelaro.netlify.app

EXECUTIVE PROFILE

I don't just build features — I **architect systems**. Senior Full Stack Software Engineer with **6+ years** shipping distributed platforms, Agentic AI pipelines, and production-grade infrastructure across **the Globe**. Master of the Python (Django / Django Ninja) and TypeScript (Next.js App Router) ecosystems. Currently engineering legal AI and GPU processing infrastructure at **LunarTech (Austin, TX)** while independently shipping **Geod AI** — a sovereign, multi-model AI workspace. I care about clean domain-driven design, defensible API contracts, and systems that hold under load. At my core, I'm simply a problem-solving nerd driven by innovation — deeply passionate about my craft and absolutely in love with what I do.

TECHNICAL EXPERTISE

Core Mastery	Node.js, Python, JavaScript, TypeScript, PHP, Laravel, Django Ninja, Next.js (App Router), React, PostgreSQL, MySQL, Docker, REST APIs, JWT/OAuth2
AI / LLM Stack	Agentic RAG (LlamaIndex / LangGraph / LangChain), Ollama (Local LLMs), OpenRouter, Gemini AI, WhisperX, NLP Pipelines, OpenCV, Scikit-learn, TensorFlow
Backend & Cloud Arch.	Microservices, Event-Driven Systems, GraphQL, Node.js, AWS (EC2, S3, RDS, IAM), Modal (GPU serverless), Backblaze B2, Nginx
Data & DevOps	MySQL, SQLite, Supabase, Redis, Schema Modeling, Query Optimisation, CI/CD (GitHub Actions), Linux, Postman, Git
Engineering Leadership	System Architecture Design, API Contract Design, Security Hardening (RBAC, JWT), Agile / Scrum, Code Review & Mentorship

PROFESSIONAL EXPERIENCE

LunarTech

May 2026 – Present | Austin, TX, US (Remote)

Software Engineer — AI Systems & Platform Engineering (Apprenticeship)

Impact: *Shipped Rosendahl (Legal AI) & Dark Phoenix (GPU pipeline) end-to-end; QA'd Octavia — database optimisation recommendations adopted team-wide to support thousands of concurrent users without degradation.*

- Engineer Agentic RAG pipelines (LlamaIndex / LangGraph) for **Rosendahl**, a self-hosted legal AI workspace, delivering fully evidence-linked and formally verified outputs across 121+ active ECHR case workspaces.
- Design legal document processing APIs (LexNLP, spaCy) for automated entity extraction and risk scoring; enforce a four-tier confidential AI model routing strategy (OpenRouter, Claude, local Ollama) to maintain data privacy.
- Architected **Dark Phoenix**, an end-to-end GPU video pipeline on Modal (TalkNet, WhisperX, Gemini AI, ffmpeg) for automated podcast clipping, YouTube ingestion, and provider-agnostic S3 storage.
- Executed comprehensive performance QA on **Octavia**, an AI dubbing platform (60+ languages, 99% lip-sync accuracy); proposed and implemented a critical database optimization technique that dramatically bolstered platform performance, enabling seamless scaling for over 10,000 users worldwide.
- Resolved critical production deployment failures involving Modal GPU image builds, dependency conflicts, and Next.js RSC compiler violations, ensuring reliable platform availability across Vercel and Modal.

Boxonia Blueprint (boxonia.com)

Oct 2024 – Present | Lagos, NG

Software Engineer (Platform & Ecosystem Architecture)

Impact: *Built Boxonia's entire digital presence from the ground up — single-handedly brought a Nigerian 360° film production & talent management studio fully online, from zero infrastructure to a live, production-grade platform.*

- Conceived, designed, and engineered a complete digital platform from the ground up for a 360° film production and talent management studio, establishing the company's first robust online presence.
- Architected and currently maintain a full Python-based platform ecosystem, including a story development workflow engine, talent directory, and project portfolio showcase, consolidating workflows across 5+ distributed production teams.
- Developed an automated talent-booking and cross-border coordination system, enabling zero-friction client onboarding and reducing scheduling overhead by 40%.
- Scaled relational schemas and secured RESTful APIs to ensure high-availability data synchronisation between production units under strict SLA requirements.

Ornament & Crime (ornamentandcrime.com)

Aug 2024 – Mar 2026 | Birmingham, AL, US

Frontend Engineer (Shopify Developer)

Impact: *Rebuilt the entire Shopify Plus storefront from the ground up — 48% faster load time, 31% checkout conversion uplift, zero downtime. The kind of migration most agencies take months to plan; delivered in weeks.*

- Architected a full Shopify Plus storefront rebuild from legacy theme to a componentised Liquid 2.0 + Tailwind CSS system, slashing page load time by 48% and directly attributing to a 31% uplift in checkout conversion over the following quarter.
- Engineered custom Shopify app integrations (inventory sync, loyalty tiers, fulfilment webhooks) via the Shopify Admin GraphQL API, eliminating an entire category of manual operations and saving 20+ staff hours per week.
- Led the brand's migration to headless-compatible architecture, setting the engineering foundation for future Next.js storefront decoupling without a single day of downtime.

Tech4mation (NativeTalk) (nativetalk.io)

Feb 2026 – Jun 2026 | Lagos, NG

Senior Software Developer, Platform Engineering

Impact: *Shipped NativeTalk CRM (nativetalk.io/crm) end-to-end across frontend and backend — reset company delivery velocity, resolved critical customer-facing issues faster than any prior engineering cycle, and directly drove an increase in company revenue while earning formal leadership recognition for measurable impact on customer satisfaction.*

- Led full-stack engineering on **NativeTalk CRM** — an enterprise-grade omnichannel command center (tasks, tickets, leads, AI reporting) serving large businesses and multiple organisations — working directly with Product Managers to ship features at a velocity that redefined the company's engineering benchmark.
- Designed and implemented end-to-end CRM features (ticket management, lead pipeline views, AI reporting dashboards) using Django Ninja on the backend and Next.js App Router on the frontend, ensuring every release shipped clean, tested, and defect-free.
- Drove aggressive bug-triage cycles against live customer SLA commitments — resolving critical production issues at a pace that directly improved customer satisfaction scores and earned formal recognition and reward from company leadership.
- Architected **TaskForge Pro**, a high-throughput internal team-management platform (Django Ninja · Next.js App Router · PostgreSQL) with decoupled microservice boundaries and strict typed API contracts.
- Standardised engineering environments via containerised Docker workflows, cutting new-engineer onboarding from 3 days to under 2 hours.

Bincom Dev Center

Sep 2025 – Jan 2026 | Lagos, NG

Full Stack Developer

Impact: *Drove frontend performance gains (35% faster FCP) and database optimizations while mentoring the next wave of tech talent.*

- Architected SEO-optimized frontend interfaces using Next.js (App Router) and React; implemented Server Components and advanced data-fetching patterns to reduce First Contentful Paint (FCP) by 35%.
- Overhauled relational MySQL schemas and refactored critical SQL queries, eliminating latency spikes and accelerating complex data retrieval by 20% under peak load.
- Mentored junior engineers in TypeScript best practices, modular component design, and strict Git workflows, measurably elevating team delivery velocity.

CyberBuddies (cyberbuddies.com)

Apr 2024 – Aug 2024 | Ibadan, NG

Frontend Engineer

Impact: *Shipped production-ready frontend pages for an AI-powered Business Operating System™ at an early product stage — directly elevating user satisfaction and driving new revenue growth, which secured high-value B2B referrals and established the platform's foundational visual language.*

- Engineered high-quality frontend UI pages and components for an AI-powered Business Operating System™, translating complex AI product requirements into clean, accessible interfaces.
- Established core UI patterns and component architecture that became the foundational visual language for the entire platform.
- Supported the migration of production workloads to AWS infrastructure, implementing optimization strategies that reduced cloud operating costs by 18% while maintaining 99.9% uptime SLAs.

SafeSpace.org Association

May 2023 – Feb 2024 | California, US (Remote)

Operations QA & Automation Engineer

Impact: *Automated review pipelines in Python/Django — 30% throughput gain, 50% fewer data errors.*

- Deployed Python/Django automated review pipelines replacing manual verification loops — 30% throughput gain, 50% fewer data-entry errors.
- Instituted rigorous automated testing protocols in containerised Docker environments, establishing company-wide benchmarks for system integrity.

Fiatci.io

Sep 2022 – Mar 2023 | Brussels, BE (Remote)

Lead Full Stack Engineer

Impact: Promoted to Lead Engineer within months of joining; directed a 7-person team to successfully ship the company's first commercial product launch.

- Rapidly promoted to Lead Full Stack Engineer based on consistent technical delivery; took full ownership of a 7-person cross-functional engineering team.
- Directed the end-to-end architecture, development, and production deployment of the company's flagship platform, culminating in the first successful commercial product launch in company history.
- Established comprehensive technical direction across frontend, backend, and DevOps infrastructure, implementing rigorous code review standards, CI/CD release strategies, and zero-downtime production cutover protocols.

FLAGSHIP SYSTEMS & AI PROJECTS

Geod — Sovereign AI Workspace

Next.js · LLMs · WebRTC · Redis

Architected and shipped a unified real-time collaboration + AI workspace — four proprietary AI engines, sandboxed code runtime, multi-modal OCR pipeline, and zero vendor lock-in by design. geod-psi.vercel.app

Rosendahl — Legal AI Platform

LangGraph · LlamaIndex · Ollama

Agentic RAG pipelines + legal document processing APIs (LexNLP / Blackstone) for ECHR case structuring across 121+ active workspaces with four-tier confidential model routing.

Dark Phoenix — GPU Podcast Clipper

Modal · WhisperX · Gemini AI · ffmpeg

End-to-end AI video pipeline: TalkNet speaker detection → WhisperX transcription → Gemini moment selection → branded MP4 export. Deployed on Modal + Vercel.

Nativetalk Support Dashboard

Next.js · TypeScript · REST APIs

Architected a centralized ticket-management dashboard for enterprise support — tracking inquiries, managing agent assignment, and surfacing real-time completion-rate metrics via strict typed API contracts. ticket-matrix-six.vercel.app

Enterprise Omnichannel CRM

Next.js · Django Ninja · PostgreSQL

Led full-stack engineering on an enterprise command center handling tasks, tickets, leads, and AI reporting. Shipped high-impact features bridging frontend UI with decoupled microservice boundaries. nativetalk.io/crm

Octavia — AI Dubbing Platform

Voice Cloning · Performance QA

Performance analysis and QA for an AI dubbing platform translating media into 60+ languages with 99% lip-sync accuracy. Resolved database bottlenecks to scale for thousands of simultaneous users. octavia.lunartech.ai

Enterprise Malware Detection Engine

Python · Scikit-learn · Security ML

Supervised ML platform for real-time endpoint malware classification with automated feature extraction and continuous retraining pipelines for evolving threat corpora.

Clinical Oncology Risk Model

Scikit-learn · Pandas · XAI

Explainable diagnostic classification model trained on clinical datasets. Prioritised interpretable feature engineering for clinical decision support.

Computer Vision Attendance Platform

OpenCV · PHP · MySQL

High-speed biometric attendance system integrating real-time webcam capture with OpenCV computer-vision pipelines and normalisation against a secured relational store.

EDUCATION & CERTIFICATIONS

B.Sc. in Computer Science <i>Federal University Oye-Ekiti, Nigeria</i>	2025
Full Stack Engineer Certificate <i>Google (Google Developer Student)</i>	2024
Advanced Software Engineering Certification <i>GB-Tech Learning Centre, Nigeria</i>	2023