

Michael Akidiwe Kuseh

Backend Software Engineer · Node.js, NestJS, FastAPI, PostgreSQL, Payments
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SUMMARY

Backend engineer with 2 years at Smart Innovations Ghana designing APIs, data models and background processing for production SaaS and government systems. Builds with Node.js (Express, NestJS) and Python (FastAPI, Celery) on PostgreSQL/PostGIS, MongoDB and Redis, and owns the details that keep systems trustworthy: access control, payment webhooks, row-level security, audit trails, tests and CI/CD.

TECHNICAL SKILLS

Languages	TypeScript, JavaScript, Python, SQL, Dart, PHP, Java & C++ (academic)
Backend	Node.js, Express, NestJS, FastAPI, WebSockets, JWT & RBAC, Paystack & Ghana.GOV payments
Data	PostgreSQL, PostGIS, MongoDB, Redis, Prisma, Drizzle, SQLAlchemy, Celery, BullMQ, Firebase
DevOps & Testing	Docker, GitHub Actions, Nginx, PM2, Linux VPS, Sentry, Vitest, Jest, pytest, k6
AI	Anthropic Claude, OpenAI, Gemini, tool-using agents, LangChain, n8n
Frontend	React, Next.js, Vue, Tailwind CSS, Ant Design, TanStack Query, MapLibre GL
Mobile	Flutter, React Native (Expo), offline-first sync, Bluetooth printing

EXPERIENCE

Software Engineer Oct 2024 – Present
Smart Innovations Ghana Ltd. Accra, Ghana

TerraPulse — Lead Engineer Live SaaS
FastAPI · PostgreSQL/PostGIS · Celery · Redis · Next.js 15 · MapLibre

- Built a geospatial SaaS that turns mineral-exploration data into ranked, explainable drill targets, writing 452 of 479 commits; 123 API endpoints with tenant isolation via Postgres row-level security.
- Built Celery pipelines that turn uploaded survey data into map tiles and XGBoost/SHAP-scored targets, with live job progress over SSE.
- Designed a multi-provider LLM layer (Anthropic, OpenAI, Gemini) and a tool-using copilot agent with allow-listed tools, spend budgets and an audit trail; ~590 automated tests and CI/CD to production.

Evenofy — Tech Lead, 6-person team Live SaaS
Next.js · Express · TypeScript · Prisma · PostgreSQL · Paystack

- Top committer on a multi-tenant event platform; built the registration form builder, QR badge PDFs, multi-scope check-in, Paystack workspace billing and the super-admin console, and set up CI/CD.

Gold Assay Laboratory System — Lead Developer Pre-release
NestJS · Fastify · Drizzle · PostgreSQL · Next.js 16 · Docker

- Wrote 165 of 201 commits on a LIMS that tracks samples from field to certificate, with instrument capture, QC release gating, a hash-chained audit trail, and Docker deployment with backups and a standby server.

National Regulatory Platforms — Lead / Core Developer 5 systems
MongoDB · Express · React · Ant Design · Redis

- Explosives and equipment permits, firearm licensing, LPG cylinder tracking and mining-industry reporting; built composite role-based access, multi-stage review workflows and licence lifecycles.
- Authored the first Ghana.GOV e-payment integration (checkout, callbacks, QR invoices, payment-gated approvals), later reused across projects.

Backend & Web Lead (Contract) May 2026 – Present Remote
Coasted (gamified maths learning platform)

- Built the Node.js/TypeScript backend with REST and WebSocket multiplayer matchmaking, Redis leaderboards, and Prisma/PostgreSQL (35 models); deployed via GitHub Actions, PM2 and Nginx.

- Implemented Paystack, Apple StoreKit 2 and RevenueCat payments with HMAC-verified idempotent webhooks and a reconciliation sweep; built the Next.js account and admin portal; k6 load tests.

SELECTED PROJECTS

BoldGym — Gym Management Platform

Live · in daily use by Bold Fitness

React · Vite · Express 5 · MongoDB · Paystack boldfitnessgh.com

- Runs a real gym's operations: 61 endpoints over 14 models, owner/admin/instructor dashboards, QR gate check-in with an access whitelist, Paystack billing with signed webhooks, and scheduled expiry and reminder jobs.

Keystone — Access Control Middleware

Open source · in development

NestJS · PostgreSQL · Prisma · BullMQ · Redis · React · Docker github.com/AkideweKuseh/Keystone

- Controls Hikvision door terminals directly over ISAPI to avoid vendor licensing; 8 BullMQ workers, Ed25519-signed webhooks, AES-GCM encrypted device secrets, and CI with 67 tests, CodeQL and gitleaks.

JobHunter AI — AI Job-Search Platform

In development

FastAPI · Celery · Redis · Meilisearch · Next.js · Expo · LangChain

- Celery workers harvest jobs from ATS boards and aggregators into a Meilisearch index; 56-endpoint FastAPI API with LLM-based CV tailoring, ATS gap analysis and Paystack credit billing; 179 pytest tests in CI.

OpenBanner — Self-Hosted Image Generation API

Open source · in use at SIG

Node.js · Express 5 · Puppeteer · MinIO · Docker github.com/AkideweKuseh/openbanner

- Template-to-image render API built to be called from n8n automations; SSRF guard with DNS pinning, sandboxed Chromium and a hardened one-command Docker deployment.

EDUCATION & CERTIFICATIONS

BSc Computer Science and Engineering, University of Mines and Technology, Tarkwa, Ghana

2024

AWS Educate Machine Learning Foundations — Amazon Web Services ([verify](#))

Jun 2025

Introducing Generative AI with AWS — Udacity ([verify](#))

May 2025

LANGUAGES

English (Fluent) · Kasem (Native) · Twi (Conversational)