

GODWIN EDGAR OPUKA

Full-Stack Developer · Solutions Architect · AI/ML Engineer · Financial Engineer

Nairobi, Kenya · +254 715 849 117 · millenialwitness@gmail.com linkedin.com/in/godwin-edgar-opuka · github.com/Godwin-88 · quantifaya.vercel.app

PROFESSIONAL SUMMARY

Financial Engineer , Full-Stack Developer and Solutions Architect with end-to-end ownership of production-grade platforms across fintech, AI, and enterprise software. Currently building Afripay — a Stellar-powered borderless remittance platform — at Zamadi Group, where I also lead all DevOps. Proficient in developing financial systems that scale and automate fiscal processes for higher enterprise value

TECHNICAL STACK

Domain	Technologies
Languages	Python, Go, TypeScript, Rust, R, SQL
Backend	FastAPI, Flask, Chi (Go), Node.js/Express, Axum (Rust)
Frontend	React 18/19, Next.js 15, Flutter, Tailwind CSS, shadcn/ui
Databases	PostgreSQL, SQLite, Redis, Neo4j, Memgraph
API & Protocols	REST, GraphQL, gRPC, ConnectRPC, WebSockets
AI / ML	LangGraph, AI Agents, ML Pipelines, QLoRA fine-tuning, LSTM, GARCH
Blockchain / Finance	Stellar Network, Web3/DeFi, Derivative Pricing, Monte Carlo, VaR/CVaR
DevOps & Delivery	Docker, Kubernetes, CI/CD, Azure DevOps, Nginx, Vercel
Enterprise	MACH Architecture, Microservices, Keycloak OIDC, NATS JetStream, Temporal

PROFESSIONAL EXPERIENCE

Full-Stack Developer — Zamadi Group

2025 – Present · Nairobi, Kenya

Lead engineer and DevOps owner across all Zamadi Group products.

Afripay — Borderless Remittance Platform (*Flagship product*)

- Architected and built the full-stack payment platform supporting cross-border remittance across 8+ African currencies using the **Stellar Network** for settlement
- Engineered an immutable **double-entry ledger system** ensuring idempotent accounting for all transactions
- Built 3-tier **KYC/AML verification** via Onfido API and a FIAT-to-USDT settlement engine
- Delivered a **React 19 admin workspace** with real-time transaction monitoring and a **Flutter mobile app** (Riverpod) for cross-platform wallet management
- Secured the API layer with JWT/refresh-token rotation and Nginx-based rate limiting

NYS Virtual Campus — Learning Management System

- Built the full LMS for the **National Youth Service Kenya** from scratch: course management, assignment tracking, grading, and analytics dashboards
- Role-based access for students, tutors, and administrators using Passport.js auth
- Stack: React 18 + TypeScript, Node.js + Express, PostgreSQL + Drizzle ORM

DevOps

- Sole owner of CI/CD pipelines, Docker containerisation, infrastructure provisioning, and deployment management across all Zamadi products

Solutions Architect & BI Lead — DigitalQatalyst (*Contract*)

Jun 2025 – Feb 2026

- Architecting the **Twin Graph Manager** — a graph-powered digital business platform modeling enterprise digital twins via Neo4j and graph data science
- Designing full-stack MACH-aligned platform: Neo4j backend, GraphQL/REST API layer, Redux state, React component-driven frontend
- Architecting a **Digital Intelligence & Analytics** solution delivering descriptive, diagnostic, predictive, and prescriptive intelligence capabilities
- Oversaw enterprise architecture modeling using Ardoq and Abacus; directed AI agent deployment for business process automation

Previously: Full-Stack Data Developer | AI/ML Engineer (Jun – Sep 2025)

- Engineered end-to-end data pipelines (Python, R, Spark, Microsoft Fabric); built CI/CD on Azure DevOps; deployed ML-powered REST/GraphQL services
-

Data Analyst — Freelance

Apr 2021 – May 2025

- Delivered quantitative analytical solutions across finance and business domains; financial statement analysis, hypothesis testing, and advanced data modeling
-

Earlier Experience

- **Claims Analyst**, Madison Group Kenya (*Jul – Nov 2022*)
 - **Asset Management Analyst**, Nairobi County Government (*Jan – Mar 2022*)
 - **Business Development Associate**, Favitech Solutions Ltd (*Oct 2020 – Mar 2021*)
-

PROJECTS

AMD EA Strategy Optimizer — AMD Developer Hackathon 2026

huggingface.co/spaces/TheQuantEd/EA_strat_optimizer

AMD Developer Hackathon 2026 · Track 1 — AI Agents & Agentic Workflows. AI-powered Enterprise Architecture platform that transforms business goals into governance-grounded, Jira-ready strategic roadmaps. Runs **Qwen2.5-72B-Instruct on AMD Instinct MI300X** via vLLM. Features a 1,416-capability Neo4j knowledge graph (44 domains, 248 subdomains), **Deep Reinforcement Learning** (REINFORCE policy gradient) for capability prioritisation, and a self-correcting LangGraph pipeline that re-invokes the generator when compliance score < 70. Exports to Jira, ServiceNow, Azure DevOps, and ArchiMate.

Python · FastAPI · Streamlit · LangGraph · Neo4j Aura · PyTorch (ROCM) · vLLM · AMD MI300X · Qwen2.5-72B · Docker

GraphAlpha — Autonomous xStocks Trading Agent (*WQU MScFE Capstone*)

github.com/Godwin-88/sturdy-couscous

Production-grade agentic trading system grounded in a **324-concept financial knowledge graph** (Memgraph). Five-agent pipeline: RegimeAgent (7-regime classifier) → SignalAgent (GARCH + LLM sentiment fusion) → RiskAgent (Half-Kelly, parametric VaR) → ExecutionAgent (Kraken xStocks) → ResearchAgent (VARLiNGAM refit).

Python · FastAPI · React · Memgraph · LangGraph · Redis · PostgreSQL · Docker · Kraken API

Agentic ERP — AI-Native Enterprise Platform

github.com/Godwin-88/miniature-couscous erpweb.vercel.app

Full-stack, AI-native ERP in **Go**. Agent loop replaces form-driven workflows — users describe intent in natural language, AI selects the correct tool, drafts actions for human approval. Modules: GL/AP/AR, HR, CRM, Supply Chain, Project Management. Ships as web (Next.js 15) and native desktop (Wails v3) from the same frontend codebase.

Go · Next.js 15 · Wails v3 · Keycloak OIDC · Casbin RBAC · NATS
JetStream · Temporal · PostgreSQL · ConnectRPC

Kenya Legal AI — Knowledge Graph & Fine-Tuning Pipeline

github.com/Godwin-88/potential-disco lexkenya.vercel.app

Ingests the Constitution of Kenya 2010 and statutory law into a **Neo4j knowledge graph** with constitutional anchoring. Fine-tunes **Mistral-7B via QLoRA** on the graph. GraphRAG retrieval with strict citation enforcement; multi-channel access via Telegram and WhatsApp bots.

Python · Neo4j · Mistral-7B · QLoRA · FastAPI · Telegram Bot API ·
WhatsApp Cloud API

Job Hunter KE — Automated Job Application SaaS

github.com/Godwin-88/verbose-sniffle · jobappagent.vercel.app

Automated job and scholarship application platform for the Kenyan market. Scrapes 10+ job boards, generates tailored CVs and cover letters via Groq/LLaMA, routes through n8n automation workflows for human review and email dispatch.

Flask · React · SQLite · n8n · PostgreSQL · Docker · Groq · Vercel
· Supabase Auth

EDUCATION

MSc Financial Engineering — WorldQuant University *Jul 2023 – Apr 2026*

(*Expected*) Coursework: Financial Data, Derivative Pricing, Stochastic Modeling, ML in Finance, Deep Learning for Finance, Financial Econometrics. Currently enrolled: Portfolio Management. Remaining: Risk Management · Capstone (GraphAlpha).

BSc Financial Engineering — Jomo Kenyatta University of Agriculture and Technology (JKUAT) *Sep 2017 – Dec 2021* Stochastic Calculus, Derivative Pricing, Game Theory, Statistical Inference, Linear Algebra, Numerical Methods.

REFERENCES

Name	Title & Organisation	Contact
Ibrahim Abdi	Systems Engineer – FS	+254 719 310 268

Name	Title & Organisation	Contact
	Planning, Safaricom PLC	
Cannel Maina	Data & Technology Lead, Centiwise	+254 706 724 017
Jibril K. Said	Finance Officer, Ministry of Health, Kenya	+254 706 757 842