MOSES NJEHU

Full-Stack Software Engineer · Angular · Go · Laravel · PostgreSQL

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SUMMARY

Full-stack software engineer with five years building production systems end to end. Angular and TypeScript on the front end, Go, Laravel and NestJS on the back end, PostgreSQL underneath, deployed and maintained on Linux. Currently own the Angular architecture for two enterprise platforms at AA Kenya and a Go microservice end to end. Outside work I have designed, built and shipped two live multi-tenant SaaS platforms in Laravel and PostgreSQL, both taking real M-Pesa payments. Comfortable owning a feature from PostgreSQL schema design through Angular or Laravel delivery, deployment, and production support.

TECHNICAL SKILLS

Frontend — Angular 19, NgRx, TypeScript, RxJS, Livewire 3, Blade, Tailwind, HTML/CSS

Backend — Go (Gin, GORM), PHP (Laravel 12), Node.js (NestJS), REST API design, microservices, event-driven architecture, queues and schedulers

Database — PostgreSQL, MySQL, schema and data modelling, query optimisation, multi-tenant design, database administration

Infrastructure — Linux server administration, DigitalOcean, Docker, Git, CI/CD, Nginx, Caddy, Redis, monitoring, incident response

Testing — Pest, PHPUnit, Go testing

Integrations — M-Pesa Daraja (STK Push, C2B, B2C), bank and SACCO payment rails, IoT/hardware data ingestion

EXPERIENCE

Full-Stack Software Engineer — AA Kenya

October 2024 – Present · Nairobi · On-site

Automotive services organisation — motoring services, driver training and member services. 500+ staff.

- Own the Angular architecture for two flagship platforms: the internal Core System used by 500+ staff (Angular 19, NgRx, 13+ feature modules) and the customer-facing portal that brings every AA service together in one place so members no longer move between separate systems.
- Built a receipting platform in PHP that sits between staff and the ERP, used by 500+ staff for 500+ transactions daily — removing the need for 80% of ERP seat licences and the recurring cost with them.
- Own a Go microservice for training and scheduling end to end (Go, Gin, GORM, PostgreSQL), including concurrency-safe booking logic so two people booking the same instructor or vehicle at the same moment cannot both succeed.
- Designed event-driven syncing of shared resources so scheduling stays consistent across services without tight coupling.
- Lead architecture for new systems and drive automation of manual operational workflows, working directly with the teams that run them.
- Optimise PostgreSQL schemas and queries, bringing target queries under 200ms, and own application monitoring and production incident response.

Software Developer — Tion Precision Electronics

April 2023 – August 2024 · Remote

Manufacturing and agricultural technology — industrial weighing hardware for farms and agribusiness.

- Led development of a multi-tenant ERP, shipping 8 modules on a modular architecture serving 5 independent client businesses.
- Connected the company's Wi-Fi weighing hardware to the ERP so a weight recorded at the scale appears instantly in head-office records — deployed across 100+ livestock farms and a milk collection centre, capturing 1,000+ readings a month.
- Replaced paper weight records with automated capture and server-side validation, closing the gap that let livestock be sold under true weight and giving head office live visibility into every site.
- Built third-party integrations and payment gateway connections into the platform.
- Administered PostgreSQL: data modelling, query optimisation, and validation rules enforcing integrity at the database layer.
- Deployed and maintained the stack on Linux servers.

Software Developer — VertexHub Group Limited

January 2022 – November 2022 · Nairobi · Hybrid

Fintech — payment processing for small and medium businesses.

- Developed and maintained a payment processing service for SME clients (Laravel front end, NestJS back end) handling daily transaction volume and end-of-day reconciliation.
- Built integrations across M-Pesa, bank and SACCO payment rails, and documented the APIs for client consumption.
- Administered PostgreSQL and handled deployments, service upgrades and server configuration on Linux.

Software Developer Intern — VertexHub Group Limited

October 2021 – December 2021 · Nairobi · Hybrid

- Built an e-commerce platform on Magento, including SEO optimisation and general site development.

PROJECTS

UrbanBoma — Property Management SaaS · Live

Laravel 12 · PHP 8.2 · PostgreSQL · Livewire · M-Pesa Daraja

urbanboma.com

Software that lets a landlord or property agency run the whole business in one place — tenants, rent, accounts, payroll, maintenance stock — instead of across spreadsheets, M-Pesa messages and a notebook. Sole architect and developer. Laravel 12 and PostgreSQL, 15 modules, 92 models, 112 migrations.

- Built single-database multi-tenancy in Laravel with tenant-ID row scoping enforced by a global query scope, so many independent property businesses run on one deployment without ever seeing each other's data, plus a platform → reseller → tenant hierarchy for white-label partners.
- Designed a double-entry accounting core in PostgreSQL that every module posts through: one journal-creation path validating debits against credits, integer-cent amounts throughout, and every ledger line traceable back to the rent payment, booking or payroll run that caused it.
- Built the M-Pesa payment pipeline (STK Push, C2B, B2C) with four independent safeguards — IP allowlisting, identifier matching, terminal-state locking and amount verification — so a repeated or forged callback cannot mark rent paid twice, and a payment matching nothing still lands in a suspense account rather than disappearing.
- Implemented a Kenya statutory payroll engine (KRA PAYE, NSSF, SHA, Housing Levy) with rates held as configuration, so a payroll run from last year reproduces against last year's rates when the law changes.
- Built the platform's own subscription billing on the same ledger: plans, trials, module gating, seat and property limits behind a single contract, and scheduled downgrades.
- Layered authorisation across tenant context, account state, subscription, module, plan feature, role and record ownership, with 187 named permissions and two-factor authentication.
- Wrote the Pest test suite against the highest-risk surfaces: cross-tenant isolation, callback forgery, cross-tenant payment authorisation and credential encryption.

Tykopass — Event Ticketing & Organiser Finance Platform · Live

Laravel 12 · PHP 8.2 · MySQL · Livewire 3 · M-Pesa Daraja
tykopass.africa

A ticketing platform where the public buys event tickets with M-Pesa and gets a QR ticket instantly, and organisers get a back office for the money side — wallets, payouts, withdrawals, invoices, sales agents and commissions. Laravel 12 and MySQL, 85 models, 161 migrations.

- Designed a pooled-funds ledger: the platform account receives the gross payment and each organiser wallet records a claim against that pool rather than holding money, with every movement writing a transaction row carrying balance before and after inside a database transaction.
- Made ticket issuance safe under concurrency with row-level locking around the check-then-generate sequence, so the payment callback, its queued retry and an organiser clicking the button cannot all issue the same ticket.
- Made M-Pesa callback handling idempotent by scoping the lookup to pending transactions, so a replayed callback matches nothing and exits rather than charging a customer twice.
- Centralised all processing-fee maths in one service, so the total a customer is shown before paying and the amount actually charged are the same calculation on every path.
- Treated ledger drift as expected rather than exceptional: hourly reconciliation reporting, daily balance snapshots, a rebuild-from-source-orders path, and 15-minute re-derivation of cached event revenue counters.
- Tuned the async layer to a low database connection limit — one self-healing queue worker draining nine named queues, with lock windows chosen so a failed release cannot silently stall the queue for a day.
- Wrote 87 PHPUnit feature tests concentrated on money movement and ticket issuance, with a named regression test behind each defect found.

EDUCATION

BSc. Computer Science — Chuka University · September 2017 – October 2021