

Emmanuel Mbagwu

BACKEND & DEVOPS ENGINEER

I find where a business is losing money, time or visibility, then build and operate the system that closes the gap.

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Open to remote and relocation

TECHNICAL SKILLS

Backend

NestJS · TypeScript · Node.js · Express · PHP · Laravel · FastAPI · Python · .NET · REST API design · JWT / RBAC · Swagger / OpenAPI

DevOps & Cloud

Docker · GitHub Actions · Bitbucket Pipelines · AWS EC2 & S3 · Azure App Services · Azure Blob Storage · DigitalOcean · Nginx · Linux administration · Server hardening

Reliability

Monitoring & alerting · Incident response · Zero-downtime deployment · Configuration standardisation · Observability · Performance tuning

Databases

PostgreSQL · MongoDB (Mongoose) · MySQL (Eloquent, TypeORM) · Prisma · Redis · Schema & index design · Transactional integrity

Payments & AI

Paystack · Stripe · Double-entry ledgers · Idempotent webhooks · Subscription & dunning logic · OpenAI API · Structured outputs

IMPACT AT A GLANCE

- **35% reduction in downtime** by replacing client-reported failures with proactive alerting
- **99.9% uptime** sustained across 3+ production applications
- Release cycle cut from **hours to under 10 minutes**
- Lead response time cut from **days to hours** with an internal CRM
- Payroll APIs serving **7 enterprise clients** and 3,000 employees
- **4 revenue-generating products** shipped independently

PROFILE

Backend and DevOps engineer with 4+ years turning operational problems into revenue-protecting systems. I have replaced spreadsheet-run sales pipelines with a CRM that cut response time from days to hours, moved a team from client-reported outages to proactive alerting that **cut downtime 35%**, and reduced release cycles from hours to under ten minutes. I work in production across the Node.js and PHP ecosystems, design data models that stay consistent as businesses grow, and own delivery end to end with Docker, CI/CD, AWS, Azure and DigitalOcean. Independently, I have designed and shipped four commercial products under ShotNub Solutions, including a multi-tenant billing platform built on double-entry accounting.

EXPERIENCE

DevOps Engineer

APR 2024 – PRESENT

DPAnalytic Solutions · Lagos, Nigeria · Remote

- Identified that leads, demo requests and contact messages across the entire product portfolio were being managed with **no unified view**; proposed and built an internal CRM that became the single system for inbound pipeline and consultation requests, replacing spreadsheets and inboxes and **cutting response time from days to hours**.
- Implemented proactive monitoring and alerting across production applications, **reducing downtime by 35%** by surfacing failures before clients reported them.
- Engineered **BONGSERP**, a marine operations platform spanning asset management, inventory, procurement, health & safety and crew accommodation, designing the data model to keep many interdependent domains consistent as records change across modules.
- Contributed to **PersonalBuildManager**, used by real estate developers and investors to track construction progress, plan schedules and control costs, addressing the problem that overruns and material waste stayed invisible until they were already expensive.
- Built the material tracking and cost reporting modules, giving developers and investors a shared view of **spend against plan**.

STACK Laravel · PHP · NestJS · TypeScript · MySQL · Azure App Services · Azure Blob Storage · Docker · GitHub Actions · Nginx

Software Engineer

OCT 2025 – MAY 2026

Payraty · Payroll, HR & Learning Management · Remote

- Built and maintained REST APIs across the **payroll calculation engine**, employee management and LMS modules of a multi-module HR platform serving **7 enterprise clients**, working within an engineering team under a team lead.
- Worked on the payroll calculation engine, the platform's highest-stakes component, where a single miscalculated field means an employee is paid the wrong amount.
- Integrated **AWS S3** for secure handling of sensitive HR documents (payslips, employee records, training materials) with access-controlled retrieval keeping files available only to authorised users.
- Managed deployment workflows on **AWS EC2 via Bitbucket Pipelines**, delivering **zero-downtime releases** to production payroll where an interrupted run has immediate consequences for **3,000 employees**.
- Ran product demos and training for enterprise buyers and their HR teams, translating platform capability into business value and relaying recurring client friction back to the team as engineering work.

STACK Laravel · PHP · MySQL · AWS EC2 · AWS S3 · Bitbucket Pipelines

EDUCATION

Education Chemistry
Imo State University
2020

EARLIER EXPERIENCE

Backend Engineer
Bleautech · Remote
2022 – MAR 2025

Built automated grading systems and payroll integrations in Node.js, Express and MongoDB, replacing manual internal processes. Optimised API and query performance, and introduced observability tooling that reduced unplanned downtime.

LANGUAGES

English (native / fluent)

EXPERIENCE (CONTINUED)

DevOps Engineer (Contract) JAN – JUN 2026
ALKADEMY · Remote

- Took ownership of deployment and reliability for **3+ production applications** on DigitalOcean, sustaining **99.9% uptime** across all services.
- Replaced a manual, error-prone deployment process with **GitHub Actions CI/CD** pipelines, cutting release time from hours to **under 10 minutes** and making same-day hotfixes possible for the first time.
- Eliminated configuration drift by standardising provisioning and applying security hardening (closing open ports, outdated packages and permissive SSH), and established **monitoring and incident response where none existed**, moving the team from user-reported failures to resolving issues before they reached end users.

STACK Laravel · PHP · DigitalOcean · GitHub Actions · Nginx · Linux administration

SELECTED PROJECTS: SHOTNUB SOLUTIONS

Billing Service: Multi-Tenant Payments Platform SHOTNUB
.NET · PostgreSQL · React/TypeScript · Docker · Paystack

Three products needed payments, but Nigerian Paystack business accounts require per-company CAC registration, so separate accounts were impossible, and duplicating the integration three times meant no shared source of truth for revenue.

- Built a multi-tenant platform serving **three independent products from one provider account** via API-key-scoped tenant isolation, backed by an append-only **double-entry ledger** enforcing balanced-entry invariants in integer minor units to eliminate floating-point rounding risk.
- Engineered a **self-managed subscription engine** from Paystack's charge-authorisation primitive, adding custom dunning, downgrade-and-recovery and a card-update flow, because the managed product could not support the required retry semantics.
- Guaranteed **at-most-once side effects** under retries via a transactional outbox and idempotency keys, backstopped by a **daily reconciliation job** auto-correcting missed webhooks.

AppliTrack: AI Job Application Platform SHOTNUB
NextJS · TypeScript · MongoDB · OpenAI · Next.js · Puppeteer

Job seekers rewrite the same resume for every application: hours of reformatting, with no way to track applications or reuse past work.

- Built an AI platform that turns a profile plus a job description into a tailored, **ATS-optimised resume, cover letter, proposal or outreach email in seconds**, with strict truthfulness guardrails so the model reframes real experience rather than fabricating metrics, scope or employers.
- Engineered a **JD-matching "remix" engine** scoring new job descriptions against prior generations (weighted Jaccard + coverage) and reusing relevant past output instead of re-calling OpenAI, **cutting AI spend on repeat and similar applications**.
- Designed credit-based billing across **Paystack and Stripe** with idempotent webhooks and atomic credit fulfilment; secured with JWT refresh-token rotation and reuse detection, rate limiting, Turnstile and HMAC-signed single-use download URLs. Authored a prompt system with an **impact ladder** that reframes every document around the problem the candidate solved rather than the tasks they performed.

DenkTrade: Stock Screener and Signal Research SHOTNUB
FastAPI · Python · PostgreSQL · React/TypeScript · Docker

Researching a stock across US equities and the NGX meant switching between four or five tools that never agreed on one ranked view.

- Designed and built a full-stack research platform ingesting real market data for US equities and the NGX, scoring instruments on fundamental and technical analysis and surfacing **ranked BUY/SELL/HOLD signals with the reasoning behind each one**.
- Built a **composite signal-scoring system** requiring independent fundamental and technical signals to agree before emitting a high-confidence recommendation, a risk-management control encoded in the scoring logic itself.

SpendNub: Rule-Based Personal Finance Engine SHOTNUB
NextJS · TypeScript · MongoDB · Cron

Budgeting tools reset every month and lose unspent funds, so users never know what is actually available per category.

- Built an engine splitting income into budget categories on the 50/30/20 model or custom rules, tracking every transaction with **double-entry ledger precision**.
- Used **atomic MongoDB \$inc operations** for all balance updates so data is always consistent, with a cron-driven sinking fund, burn-rate forecasting and three-tier subscription monetisation.