Odinaka Robert Nnamani

Full-Stack Software Engineer | Backend and Systems

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SUMMARY

Backend-leaning full-stack engineer with 3+ years shipping and running production systems in TypeScript/Node.js and Python on AWS and PostgreSQL. I built Rootmail, a multi-tenant email platform (112,000 lines of TypeScript, solo, now in invite-only beta), kept a US company's document-translation platform at 99%+ uptime, and maintain an open-source Postgres library for Drizzle ORM. Strongest in queue-based and retry-safe design, multi-tenancy, API design and owning production end to end, from architecture to on-call.

SKILLS

Languages: TypeScript, JavaScript, Node.js, Python, Swift, C, Ruby

Frameworks: Fastify, NestJS, Express.js, FastAPI, Flask, React.js, Next.js, Angular, SwiftUI, GraphQL, REST APIs

Databases: PostgreSQL (Drizzle ORM), Supabase, MongoDB, Redis, Oracle SQL; data modelling, indexing, migrations, triggers and partitioning

Cloud and DevOps: AWS (Lambda, EC2, S3, SES/SESv2, DynamoDB, SNS, CloudFront), Docker, Nginx, Terraform (IaC), CI/CD, CircleCI, monitoring, Turborepo/pnpm monorepos, Linux, Bash

Testing: Jest, Mocha, Sinon, PyTest, node:test; TDD, unit and integration testing

Practices: distributed queueing and event-driven workers (BullMQ), asynchronous background jobs, multi-tenancy and tenant isolation, idempotency and retry semantics, offline sync and conflict resolution, cryptographic signing (Ed25519), system design, Agile/Scrum

EXPERIENCE

Founder & Principal Engineer, Rootmail — Remote | Jun 2026 – Present

- Designed and built an email-infrastructure platform end to end: 112,000 lines of TypeScript across a six-app, nine-package pnpm/Turborepo monorepo, delivered solo in under three months; now in invite-only beta.
- Architected a three-layer data model that serves a solo developer and a multi-tenant platform from a single API: workspaces spawn sub-tenants with independently verified sending domains, per-tenant DKIM keys and isolated reputation, with no migration between tiers.
- Built the sending core on Fastify, Drizzle/PostgreSQL and a Redis/BullMQ priority queue, with idempotency-key exactly-once delivery, suppression checks before every send, and an append-only lifecycle audit log per message.
- Implemented Ed25519-signed, independently verifiable proof bundles capturing a message's full lifecycle and content hash, giving regulated buyers an exportable audit artefact per message.
- Shipped the surrounding platform solo: first-party auth (TOTP MFA, OAuth, SAML), Stripe billing, inbound SES parsing and threading, an operator dashboard, plus a TypeScript SDK.

Chief Technology Officer, Outly Technologies — Lagos, Nigeria | Feb 2026 – Jun 2026

- Technical lead of an early-stage consumer marketplace: designed and built the mobile product end to end (BFF architecture, REST APIs and the client experience) from zero to a working app.
- Made the caching and data-modelling decisions at architecture stage that cut app load times by 40%, rather than optimising a slow product after the fact.
- Concluded the marketplace was not finding traction and redirected the effort into Rootmail, rather than continuing to build something the market was not asking for.

Full-Stack Software Engineer, Oneshot Translation — Portage, MI, USA (Remote) | Dec 2024 – Dec 2025

- Designed and shipped full frontend and backend systems for a document translation SaaS (NestJS, Next.js, AWS Lambda, EC2, Nginx, Docker, CI/CD, monitoring), achieving 99%+ annual uptime through proactive infrastructure management.
- Built a custom AWS Lambda pipeline to automate document ingestion and processing, eliminating a manual workflow and cutting turnaround time by ~60%.
- Collaborated directly with US-based clients to translate requirements into production features, managing sprints and delivery milestones independently.

Full-Stack Software Engineer, African Learners Experience (ALX) — Nairobi, Kenya (Remote) | Jul 2023 – Aug 2024

- Architected and deployed a multi-server Airbnb clone with round-robin load balancing, doubling the system's capacity to handle concurrent user traffic.
- Engineered a RESTful API with Redis-backed session authentication in Python/Flask, securing user sessions across a mobile application with zero reported auth vulnerabilities.
- Implemented a custom printf function in C and a UNIX shell interpreter from scratch, covering memory management and process execution.

OPEN SOURCE

drizzle-pg-extras, maintainer | TypeScript, PostgreSQL, Drizzle ORM Nov 2026 – Present
github.com/Robertpaschal/drizzle-pg-extras

- Built an MIT-licensed library that lets Drizzle ORM users declare Postgres functions, triggers, comments, extensions, partitioned tables and TimescaleDB hypertables next to their schema, and generates plain SQL migrations.
- Closes long-open Drizzle feature requests with more than 1,000 combined reactions (triggers #843, comments #886, partitions #2854, hypertables #2962); five merged PRs took it to v0.5.0, each with CI passing on Node 18 and 22.

Contributions to other projects Oct 2026 – Present

- Opened a fix for MailDev (6,000+ stars) for its email preview sandbox (issue #603), and had a documentation PR merged at OpsiMate covering missing mailer and login configuration keys.
- Diagnosed email delivery failures in issue threads for projects including mailcow (13,000+ stars) and Forward Email; maintainers of several smaller projects adopted my fixes for SES suppression, SNS signature verification and per-tenant sender reputation.

PROJECTS

Rootmail, multi-tenant email infrastructure | TypeScript, Fastify, PostgreSQL, Redis/BullMQ, AWS SES rootmail.io

- Business email platform for SaaS teams: one API serves a solo developer or a multi-tenant platform, with per-tenant sending domains, DKIM keys and reputation, and a verifiable record of what happened to every message.
- Checks every From address against the tenant's verified domains before sending; per-tenant bounce and complaint thresholds warn, throttle and pause sending automatically; bring-your-own sending live for SES and Mailgun.

Sprout, native habit tracker | Swift, SwiftUI, Supabase (PostgreSQL, Auth) Oct 2026 – Present

- Building a native iPhone app with a Mac companion on a shared Swift package (habits, streaks, local persistence, backups and opt-in reminders); preparing a TestFlight beta.
- Designed account sync on Supabase with database-enforced ownership, durable upload retries, revision checks that reject stale writes, and conflict recovery that keeps a local backup; friend sharing runs through RPC-only, per-friend grants.

heypascal.me, personal site and consulting presence Oct 2026

- Designed and built a personal engineering site with 8 packaged service offerings (backend APIs, AWS and deployment, retry-safe systems), a project-brief intake pipeline (DynamoDB + SNS), and privacy-first analytics.

Intelligent Writing Assistant | Python, FastAPI, PostgreSQL, React.js, Redis, PyTest github.com/Robertpaschal

- Built a full-stack AI writing tool with real-time grammar checking, plagiarism detection, content summarisation and auto-completion, owning it end to end from database schema to user interface.

Custom printf and UNIX Shell | C, Bash github.com/Robertpaschal

- Implemented a spec-compliant printf in C supporting multiple format specifiers, and a full UNIX command interpreter with environment variable management.

WRITING

- "SES Returned 200. The Email Never Arrived.": deep-dive on silent email delivery failures (SES 200s, suppression lists, bounce-state machines), published Oct 2026 on DEV, Medium, Substack, LinkedIn and X.
- "If-Match: two curls, one 412": HTTP conditional requests and optimistic concurrency, published on DEV and Medium.

EDUCATION AND SERVICE

Software Engineering Programme, ALX Africa (African Learners Experience) Nairobi, Kenya | Jul 2023 – Aug 2024
Validated averages: 131.9% in Software Engineering Foundations and 128.19% in Short Specializations (advanced tasks allow scores above 100%). Systems programming, distributed systems, full-stack development.

B.Sc. Parasitology & Entomology, Nnamdi Azikiwe University Anambra, Nigeria | Sep 2018 – Apr 2023
Second Class Honours, Upper Division, 4.04/5.00.

National Youth Service Corps (NYSC), Ministry of Health Nov 2023 – Oct 2024
Administrative role.

CERTIFICATIONS

- Backend Software Developer Certification, ALX Africa, 2024
- Introduction to Front-End Development, Coursera / Meta, 2023
- Leadership as a Practice, Global Citizen Year Academy, 2021