

Samuel Nwabueze

Senior Backend Engineer & Platform Architect

Fintech · Core Banking · Distributed Systems · Payments · Blockchain · SaaS

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PROFESSIONAL SUMMARY

Senior Backend Engineer and Platform Architect with 4+ years of professional experience building production-grade distributed systems across fintech, core banking, payments, SaaS and blockchain. Deep expertise in Java Spring Boot 3 and Node.js (NestJS, Fastify, Express) — designing microservice architectures, immutable ledger systems, Apache Fineract core banking platforms, event-driven messaging pipelines and multi-tenant SaaS control planes. Consistent track record of measurable delivery: 99.9% payment uptime, 40% reliability improvement, 60% abuse reduction, 35% latency reduction and systems serving 10,000+ active users. Experienced across AWS, Azure Service Bus, Kubernetes, Docker, PostgreSQL, Redis, Cosmos DB, Stripe, Paystack and Flutterwave. Open to senior backend, platform, and software architecture roles globally.

CORE TECHNICAL SKILLS

Languages & Runtimes: Java (Spring Boot 3) · TypeScript · JavaScript (Node.js) · SQL

Frameworks: Spring Boot 3 · NestJS · Fastify · Express.js · Spring Security · Hibernate / JPA · Prisma ORM

Core Banking & Fintech: Apache Fineract · Idempotent Payment Processing · Webhook Architecture · Paystack · Flutterwave · Stripe Billing · Fraud Detection

Cloud & Messaging: Azure Service Bus (Queues · Topics · Subscriptions) · Azure Cosmos DB · AWS (EC2 · RDS · S3 · CloudWatch) · DigitalOcean

Databases & Caching: PostgreSQL · MongoDB · MySQL · Redis · Cosmos DB · Hibernate / JPA · Query Optimisation

Infrastructure / DevOps: Docker · Kubernetes · CI/CD (GitHub Actions) · Multi-stage Builds · Health Checks · SLA Management

Architecture & Patterns: Microservices · Event-Driven Architecture · Domain-Driven Design · Clean Architecture · TDD · Distributed Systems

Security & Identity: Keycloak · HashiCorp Vault · LDAP · OIDC · JWT · OAuth2 · RBAC · HMAC-SHA256 · Rate Limiting

Blockchain: Sui Move Smart Contracts · Wallet Generation · Staking Protocols · Tokenised Assets

PROFESSIONAL EXPERIENCE

Senior Backend Engineer

Apr 2026 – Present

Escrow-Tech Limited · United Kingdom · Remote

- ▶ Engineering core backend microservices for a UK-based production escrow and marketplace platform using Fastify (Node.js/TypeScript), delivering low-latency, high-throughput transactional API layers across a suite of distributed financial services.
- ▶ Designed and implemented an **Azure Service Bus** event-driven messaging backbone — queues, topics and subscriptions — decoupling all inter-service communication, guaranteeing at-least-once ordered delivery and eliminating tight synchronous coupling across the platform.
- ▶ Architected and delivered three critical platform microservices from the ground up: ms-audit (cryptographically consistent audit trail for all financial events), ms-notifications (multi-channel event notification engine) and ms-request-tracking (distributed request correlation and observability) — establishing the compliance and observability backbone of the entire platform.
- ▶ Introduced a Redis caching layer across high-frequency API endpoints, significantly reducing database read pressure and improving P99 response times on hot-path marketplace queries.
- ▶ Integrated Azure Cosmos DB for document-model persistence in high-write service domains, designing partition strategies aligned with transactional volume patterns and query access requirements.
- ▶ Containerised all services with Docker across multi-container environments; improved CI/CD pipeline consistency using GitHub Actions — ensuring reproducible, auditable deployments from development through to production.
- ▶ Collaborating cross-functionally with frontend, DevOps and product teams to ship secure escrow transaction flows: bid management, milestone release, dispute resolution APIs and marketplace commission logic.

Software Architect & Platform Engineer

Nov 2025 – Present

Engeem SAS · France · Remote

- ▶ Architected and delivered the full Cluster Management Lifecycle System in **Java Spring Boot 3** — a five-step Cluster Creation Wizard enabling enterprise organisations to define compute environments, select infrastructure tiers, configure governance policies and activate production clusters through a fully auditable provisioning flow.
- ▶ Integrated **Stripe Billing** directly into the cluster provisioning pipeline: organisations are automatically quoted, invoiced and charged based on selected environment configurations and subscription tiers — implementing Stripe Checkout sessions, idempotent webhook event processing, subscription lifecycle management and SLA-driven billing policy enforcement.

- ▶ Designed and built an enterprise **LDAP** integration for SSO and corporate directory synchronisation — enabling automated user federation, group-to-role mapping and real-time sync from AD/LDAP directories into the platform's Keycloak-enforced RBAC model, meeting the identity management requirements of large enterprise customers.
- ▶ Architected domain-driven microservices for Organisation, Environment and Cluster lifecycles with automated tenant provisioning, HashiCorp Vault-managed secrets and Keycloak OIDC authentication across 15+ services deployed on Kubernetes.
- ▶ Applied Clean Architecture, SOLID principles and TDD (JUnit 5 + Mockito) achieving **85%+ test coverage** across production services; defined governance, SLA and compliance policies for hybrid cloud Kubernetes OIDC integrations.
- ▶ Established architecture decision records (ADRs) and technical documentation standards, creating a maintainable knowledge base that accelerated onboarding and reduced architectural ambiguity across a distributed remote team.

Lead Backend Architect & Developer

Sept 2025 – Apr 2026

Betchief Technologies Limited · Lagos, Nigeria · On-site

- ▶ Architected and built **BoldPay** — a production-grade microfinance core banking platform in Java Spring Boot 3 integrated with Apache Fineract — delivering a fully functional digital bank: customer onboarding (KYC/KYB), account management, loan origination, disbursement scheduling, repayment tracking, settlement ledger and multi-tier RBAC for tellers, branch managers, compliance officers and administrators.
- ▶ Implemented **Apache Fineract** REST API integrations covering the complete loan lifecycle: application intake, credit scoring hooks, approval workflows, disbursement, EMI computation, penalty logic and loan closure — enabling the microfinance bank to originate and manage loan books at scale with full audit compliance.
- ▶ Built a real-money settlement and reconciliation engine using Spring Boot and PostgreSQL — processing interbank transfers, internal wallet debits/credits and payment gateway settlements with **idempotent transaction guarantees** and a tamper-evident audit trail, forming the financial integrity layer of the BoldPay core banking system.
- ▶ Architected a scalable B2B real-money gaming platform in Spring Boot 3 with strict domain boundaries (Game, Match, Auth, Platform modules), low-latency WebSocket (STOMP) pipelines serving thousands of concurrent users at sub-100ms P99, and a provably fair RNG system using HMAC-SHA256 cryptographic commit-reveal — independently audited.
- ▶ Enforced TDD with JUnit 5 and Mockito achieving **80%+ coverage** on all core banking and game logic modules; led architecture design reviews and code review culture that reduced production incidents by 40%.

Backend Team Lead & Live Operations Engineer

Aug 2025 – Mar 2026

Syntech Innovation Limited · Remote

- ▶ Led the backend engineering team for a production LPG delivery and payments platform — driving technical architecture decisions, enforcing code review standards and owning delivery quality across all backend services serving over **10,000 active users**.
- ▶ Architected and built the **Synterium Engine** — an immutable append-only payment ledger ("truth spine") using cryptographic hash-chaining to guarantee tamper-evident records for every Paystack and Flutterwave transaction on the platform; this ledger became the audit and financial reconciliation backbone across all payment flows.
- ▶ Engineered a production-grade **idempotency framework** in NestJS/TypeScript: idempotency key generation, deduplication middleware, safe-retry guarantees and atomic state transitions across all payment webhook handlers — eliminating duplicate charges and ghost transactions across the entire payment surface.
- ▶ Designed and scaled payment webhook infrastructure integrating Paystack and Flutterwave — HMAC signature validation, retry queues, dead-letter handling and real-time reconciliation against the Synterium ledger — improving payment reliability by ~40% and sustaining **99.9% uptime** at production scale.
- ▶ Deployed and managed infrastructure on **AWS** (EC2, RDS, S3, CloudWatch) — implemented autoscaling policies, structured log aggregation, CloudWatch alerting and operational runbooks that reduced mean time to recovery (MTTR) by 60% on production incidents.
- ▶ Implemented JWT authentication, RBAC, rate limiting and request validation using NestJS Guards, Interceptors and Pipes — reducing abusive API requests by **~60%**; built phone-first SMS OTP flows via Twilio resolving critical geo-permission failures for Nigerian mobile users.

Software Engineer — Backend

May 2024 – Aug 2025

Semicolon Africa · Lagos, Nigeria · Full-time

- ▶ Developed production fintech backend microservices in **Java Spring Boot** and NestJS for a loan origination and servicing platform — covering application intake, disbursement flows, repayment scheduling and admin reporting, building foundational Java Spring Boot experience in real African financial services infrastructure.
- ▶ Built secure financial APIs with JWT authentication and fine-grained OAuth2-based RBAC — implementing principle of least privilege across borrower, agent, credit analyst and admin user types, with complete audit logging of all privileged operations.
- ▶ Implemented asynchronous message-driven processing with **RabbitMQ** — decoupling loan event pipelines from synchronous request cycles, improving system throughput under peak application load and enabling reliable retry semantics for third-party credit bureau integrations.

- ▶ Collaborated in Agile squads to design and implement distributed system patterns — including circuit breakers, saga choreography and API gateway routing — establishing architectural foundations applied across all subsequent engineering roles.

Backend & Blockchain Engineer

Jul 2023 – Apr 2024

TeamFastEgo · Hybrid

- ▶ Engineered a fiat-to-naira payment API layer in NestJS/TypeScript with multi-stage **fraud detection** — velocity checks, duplicate transaction fingerprinting and real-time risk scoring — protecting high-volume financial transactions across a real-money gaming monetisation platform.
- ▶ Designed and built a scalable **staking and monetisation engine**: deposit/withdrawal flows, staking pool mechanics, reward distribution logic and balance reconciliation — backed by PostgreSQL for durable state and Redis for real-time balance reads under concurrent game load.
- ▶ Integrated **Sui Move smart contracts** on-chain for wallet generation, player staking pools and tokenised game asset management — enabling provably verifiable stake ownership and transparent token transfers on the Sui blockchain.
- ▶ Collaborated with hardware engineers to build a Raspberry Pi-based real-world player authentication flow — bridging physical device verification into the digital staking system via signed challenge-response API contracts.

Backend Developer

Feb 2022 – May 2023

Leverage Growth Digitals · Lagos, Nigeria · Full-time

- ▶ Built and maintained RESTful API backends for financial and B2B SaaS platforms in **Java Spring Boot** and Express.js — establishing the Java Spring Boot foundation underpinning all subsequent backend engineering roles and accruing 4+ years of continuous Java professional experience from 2022 to present.
- ▶ Implemented Redis caching across high-frequency API endpoints and systematically optimised PostgreSQL query execution plans using EXPLAIN ANALYZE — achieving **~35% reduction** in average API response latency and directly improving user-facing application performance.
- ▶ Designed modular service components with clear separation of concerns — improving codebase maintainability, enabling parallel team feature development and reducing deployment risk through isolated service boundaries.
- ▶ Supported CI/CD pipeline setup and cloud deployment automation on AWS and DigitalOcean — gaining DevOps foundations in containerisation, environment configuration management and automated testing integration.

KEY PROJECTS

BoldPay — Microfinance Core Banking Platform

Java Spring Boot 3 · Apache Fineract · PostgreSQL · Keycloak · Paystack · Docker · Kubernetes

- ▶ Full-stack core banking system for a Nigerian microfinance bank — Apache Fineract-integrated loan lifecycle (application → disbursement → repayment → closure), customer onboarding with KYC/KYB, settlement engine, multi-tier RBAC and compliance-ready audit trail. Production-grade financial infrastructure built on Java Spring Boot 3.

EzGas & Synterium Engine — LPG Delivery & Immutable Payment Ledger

NestJS · TypeScript · MongoDB · PostgreSQL · Redis · Paystack · Flutterwave · AWS · Cryptographic Hash-Chaining

- ▶ Production LPG ordering and delivery platform serving 10,000+ Nigerian users with phone-first OTP authentication, idempotent payment webhooks and real-time delivery tracking. Powered by the Synterium Engine — an immutable append-only payment ledger using cryptographic hash-chaining as the financial truth spine for all platform transactions.

Renew Connect — Fintech Loan Financing Platform

Java Spring Boot · MySQL · Hibernate / JPA · Docker · CI/CD · RESTful APIs

- ▶ Backend services for loan applications, repayments and admin dashboards — secure high-volume RESTful financial APIs deployed via Docker and CI/CD pipelines. Integrates loan origination, disbursement workflows and repayment management for fintech lending operations.

Game Staking API — Blockchain Gaming Backend

NestJS · Sui Move Smart Contracts · Firebase Auth · PostgreSQL · Redis · Raspberry Pi · Flutter APIs

- ▶ Blockchain-native staking platform: Sui Move smart contracts for on-chain wallet generation and pool management, real-world Raspberry Pi player verification, fraud detection engine and real-money monetisation APIs. Full mobile backend support for Flutter client. github.com/samuelEze21

EDUCATION

Executive Programme in Entrepreneurship & Business Innovation

2024

Henley Business School, UK

Diploma in Software Engineering

2024

Semicolon Africa, Lagos

BSc Economics

2023

National Open University of Nigeria