

# ALIU BOLADE LAWAL

## Senior Product Engineer & Solutions Architect

*Fintech Systems, APIs & Multi-Product Delivery* • *Java/Spring Boot, TypeScript, Node.js, React Native*  
Lagos, Nigeria • +234 703 713 5181 • [aboladelawal@outlook.com](mailto:aboladelawal@outlook.com) • [LinkedIn](#) • [GitHub](#) • [Portfolio](#)

### PROFILE

---

Product engineer with 8+ years shipping production financial systems end to end, from thesis to live in market. Through Openfactor Technologies I served First Bank of Nigeria for three years, where I solo designed and built the bank's Treasury Investment Platform (T-bills live in production; FGN Bonds, Eurobonds, and Commercial Paper architected against the same instrument lifecycle), shipped significant enhancements to the Smart Account Opening and Smart Corporate onboarding workflows in production, refactored the Bulk NIN Linkage utility to production-stable at high volume, and led the CBPR+ ISO 20022 converter rollout across all 7 subsidiaries. In parallel, I run Alpha Global Tech (AGT) where I have shipped two consumer products in the last year: Picki, a multi-vendor commerce platform live with 30+ vendors, and Havyn, a multi-tenant child check-in SaaS with a native mobile app now in production at [gethavyn.app](http://gethavyn.app). I own the full slice: product thesis, system architecture, database schema, API design, mobile and web frontend, third-party integrations, deployment, and operations. Strong patterns for double-entry posting, idempotency, event-driven systems, retry orchestration, and graceful degradation. AGT also publishes reusable banking middleware under commercial licensing.

### FLAGSHIP PRODUCTS & SYSTEMS

---

#### Treasury Investment Platform — First Bank of Nigeria (via Openfactor)

Solo designed and built First Bank's institutional investment platform end to end on Newgen iBPS, working directly with senior stakeholders across Treasury, Operations, and IT to scope requirements, align on architecture, and coordinate integration with the core banking team. T-bills currently live in production handling daily multi billion naira flows across primary and secondary market. FGN Bonds, Eurobonds, and Commercial Paper architected against the same unified instrument lifecycle and in pipeline for release. Integrated with the bank's core banking system (Finacle) for customer account posting.

- **Bid and subscription:** primary market (auction subscription) and secondary market (same day execution). Captures customer account, instrument details, tenor, face value, and channel of origin.
- **Eligibility and validation engine:** pre-trade checks on customer account standing, KYC status, available balance, transaction limits, and regulatory eligibility. Blocks ineligible transactions before posting.
- **Settlement and posting:** same-day settlement for secondary market and post-auction settlement for primary. Double entry posting via Finacle APIs against customer accounts and the head office investment account, with reconciliation hooks and full audit trail.
- **Interest computation and scheduled payment service:** interest engine computes coupon and discount elements at the instrument level. Background scheduled service pays interest to customer accounts, with rules differentiated by instrument type. Idempotent execution with recovery on failure.
- **Maturity, rollover, liquidation, and certificate generation:** auto-liquidation on maturity with principal credit, customer-elected rollover into new tenor and rate, pre-maturity liquidation, Proof of Investment (POI) certificate issuance, and custodian transfer with appropriate posting, audit, and regulatory reporting hooks.

#### Picki — Multi-vendor Commerce Platform ([picki.store](http://picki.store))

Conceived, designed, and shipped solo. Multi-vendor commerce platform for the Nigerian market on Next.js 14 with TypeScript, Node.js API layer, Supabase (PostgreSQL), Vercel, and Paystack. Launched April 2026, currently in beta with 30+ active vendors.

- Product ownership end to end: identified the market opportunity, designed the vendor-first commerce model, and made all product calls on scope, pricing, third-party integrations, and go-to-market.

- API surface: 84 REST endpoints across vendor onboarding, KYC verification, product management, order lifecycle, payments, and admin operations. Consistent contract patterns, schema validation, structured error handling, and idempotency on payment and order operations.
- Integrations: Paystack for payments with webhook handling and reconciliation, Termii for SMS with GSM-7 Unicode sanitisation to reduce per message cost, Resend for transactional and broadcast email, Fez for delivery, and Groq (Llama 3.3 70B) for conversational AI checkout.
- Operations: PostgreSQL schema with Row Level Security for multi-tenant data isolation, push notification infrastructure across 15 lifecycle events with web push and key rotation, structured logging via a central `api_call_log`, and payment reconciliation tooling.

### **Havyn — Multi-tenant Child Check-in SaaS (gethavyn.app)**

Conceived, designed, and shipped solo as a mobile-first product for churches, schools, and daycares. Full multi-tenant model with an org, branch, and session hierarchy. Native mobile app built with React Native and Expo (EAS Build and OTA delivery), REST API on Next.js/Node.js, PostgreSQL via Supabase. In active production and continuously deployed.

- Product ownership end to end: designed the check-in and checkout flow, the guardian pairing model, the multi-tenant admin hierarchy, and the design system across 18 production-grade screens.
- Mobile engineering: React Native with Expo, native permission flows, QR-code parent-to-org pairing, guardian side mobile flow with live location verification, and a server-of-record cache-then-network sync pattern for offline resilience.
- Backend: 33 API routes against a 12-table Supabase schema, role-based admin separation across org, branch, and session levels, and event-driven notification pipeline reused across web and mobile clients.
- Delivery: EAS Build for iOS and Android, OTA update channels, staged rollouts, and integrated crash reporting.

### **ADDITIONAL DELIVERY AT FIRST BANK OF NIGERIA (VIA OPENFACTOR)**

---

#### **ISO 20022 Converter Programme**

Led the CBPR+ international payment converter rollout across all 7 FBN subsidiaries, and planned and personally implemented the local RTGS converter rollout for Gambia, Ghana, DRC, and Senegal.

- CBPR+ track: drove the cross border payment converter migration aligned to the SWIFT ISO 20022 deadline, coordinating with subsidiary technology teams across the group on deployment, configuration, and integration.
- Local RTGS track: planned the full 7-country rollout, then owned implementation, deployment, and integration for the four subsidiaries above. Each deployment integrates the local RTGS system with the bank's correspondent network.
- Cross-subsidiary value: enabled local currency clearing and simplified group settlement across the FBN footprint in West and Central Africa.

#### **Smart Account Opening & Smart Corporate Enhancements**

Delivered significant enhancements across the Smart Account Opening (retail) and Smart Corporate (corporate) onboarding workflows on Newgen iBPS. Both platforms are live in production, powering onboarding across FBN's branch network.

- Retail flow enhancements (Smart AO): tuned KYC validation services, improved audit trail visibility, refined multi-tier authorisation logic, and shipped modification flows for existing customer records aligned with CBN compliance updates.
- Corporate flow enhancements (Smart Corp): document validation improvements, mandate capture refinements, and adjustments to the approval hierarchy specific to corporate customers.

#### **Bulk NIN Linkage Utility**

Refactored a regulatory data linkage utility from seven sequential JARs into a single multi-threaded service. Diagnosed and corrected thread safety issues from shared static fields, tuned thread count to 30 (50 caused silent iBPS update failures), and added a circuit breaker that aborts a stage after 10 consecutive timeouts. Live in production and stable at high volume, with enhancements ongoing.

## Subsidiary Cross Border Payment Service

Spring Boot 3 / Java 17 service that ingests payment data from an upstream regulatory application, constructs valid SWIFT messages, and dispatches them to the bank's correspondent network. Development complete, code handed over to the Payment Hub team for integration, UAT, and deployment.

- Reliability patterns: tuned retry orchestration (2, 5, 10, 10, 10 minute intervals), circuit breakers for downstream failures, idempotency on retried messages, and a startup recovery routine for orphaned records. Resolved a circular bean reference between Spring Boot 3 and the IBM MQ Spring Boot Starter using a custom `MQConnectionFactoryCustomizer` pattern.
- Security and operations: Jasypt encrypted credentials with externalised configuration, structured logging across application, error, audit, and health channels. Cleared a nine-finding security review with all findings closed before handover.

## Estacode USD Payment System

End to end backend system handling USD payments to FBN staff travelling abroad for training. In development at the point of engagement exit; code handed over. Spans rate calculation, multi stage workflow approval, automated SWIFT message generation, multi protocol dispatch, and offshore accounting entries between FBN's New York and London nostro accounts.

- Rate calculation engine: configurable rate service across a 12 grade by 6 destination matrix, computing daily rate, travel days (flight hours rule, 7+ hours triggers 4 travel days), training coverage rules, and grade based eligibility.
- Multi-protocol dispatch switch: configurable routing layer that can dispatch SWIFT messages via the bank's converter, directly to the alliance gateway via REST API, or via IBM MQ. Same construction pipeline, environment driven downstream selection.

## ALPHA GLOBAL TECH (AGT) — PRODUCTS & OPEN SOURCE

---

AGT is my operating base for building consumer products and productising banking middleware. Alongside Picki and Havyn above, AGT publishes reusable banking infrastructure with commercial licensing.

- **iso20022-converter** ([github.com/aboladelawal/iso20022-converter](https://github.com/aboladelawal/iso20022-converter)): Bi-directional SWIFT MT and ISO 20022 MX message converter on Java 17 and Spring Boot 3. Covers MT102, MT103, MT202, MT205, MT900, MT910, MT940, plus pacs.008, pacs.009, pacs.002, pacs.004, camt.053, and camt.054. Multi-adapter routing across IBM MQ, SFTP, REST API, and filesystem. Full SAA envelope construction, Business Application Header generation, operations dashboard with Spring Security, audit trail, and per-installation licensing model.
- **sftp-mq-bridge** ([github.com/aboladelawal/sftp-mq-bridge](https://github.com/aboladelawal/sftp-mq-bridge)): Spring Boot 3 service bridging SFTP file drops with IBM MQ queues, for partner integrations where one side speaks files and the other speaks messages. Scheduled polling, JMS listeners, dead letter queue routing, Spring Boot Actuator health indicators, and structured audit logging.
- **Kaynah** (in development): geofence-gated seat allocation platform for large church programs. AGT's third consumer product.

## PROFESSIONAL EXPERIENCE

---

**Senior Product Engineer** • *Alpha Global Tech (AGT)* 2026 – Present

- Operating base for consumer product development and productised banking middleware. Shipped Picki (April 2026, 30+ vendors) and Havyn ([gethavyn.app](https://gethavyn.app), mobile and web in production). Kaynah in development.
- Published iso20022-converter and sftp-mq-bridge as productised banking middleware with commercial licensing. Public repositories are architecture previews; full implementations are held under commercial license.

**Senior Software Engineer** • *Openfactor Technologies — Client: First Bank of Nigeria* Mar 2023 – May 2026

- Solo-owned the Treasury Investment Platform end to end. Engaged senior stakeholders across Treasury, Operations, and IT to scope requirements and align delivery timelines. T-bills live in production; FGN Bonds, Eurobonds, and Commercial Paper architected in pipeline against the same lifecycle.
- Led the CBPR+ ISO 20022 converter rollout across all 7 FBN subsidiaries and personally implemented the local RTGS converter for Gambia, Ghana, DRC, and Senegal.

- Delivered significant enhancements to the Smart Account Opening and Smart Corporate onboarding workflows in production, spanning KYC updates, audit trails, and multi-tier authorisation logic.
- Refactored the Bulk NIN Linkage utility from seven sequential JARs into a single multi-threaded service. Live in production and stable at high volume.
- Built the Subsidiary Cross Border Payment Service (development complete, code handed over) and the Estacode USD payment automation system (in development at exit).
- Lead technical mentor for two junior engineers under a structured engineering development programme covering Java, Spring Boot, system design, and code review practices.

**Software Engineer** • *TAJBank Limited*

Aug 2021 – Feb 2023

- Designed and shipped event-driven Account Opening and Account Maintenance workflows for Nigeria's first non-interest digital bank. Cut process cycle time by 50% and enabled instant onboarding aligned with CBN compliance and Sharia banking requirements.
- Integrated KYC gating and customer information modification flows, with downstream alerts to compliance and relationship management teams.
- Owned BPM measurement and reporting to senior leadership, with regular reviews of process metrics and benefit realisation.

**Automation Engineer** • *First Bank of Nigeria*

Nov 2019 – Dec 2020

- Built the Finacle Limit Enhancement Application, achieving a 50% reduction in operational cost of core banking limit enhancement through workflow automation.

**Software Developer (Intern)** • *Gridworx Systems Strategies Limited*

Nov 2017 – Apr 2019

- Documented requirements and contributed to the implementation of a KYC address verification solution.

**TECHNICAL SKILLS**

---

- **Languages:** Java 17, TypeScript, JavaScript, SQL
- **Backend & Systems:** Spring Boot 3, Node.js, Next.js API routes, REST APIs, microservices, event-driven architecture, async messaging (IBM MQ), retry orchestration, circuit breakers, idempotency, scheduled background services, double-entry posting patterns
- **Frontend & Mobile:** React, Next.js 14, React Native, Expo (EAS Build, OTA updates), server components, Tailwind CSS, responsive design across web and mobile
- **Databases:** PostgreSQL (Supabase and self-hosted), Oracle, schema design, Row Level Security, query optimisation, JPA/Hibernate, safe migrations
- **Cloud & Infrastructure:** Vercel, Supabase, EAS (Expo Application Services), RHEL on-premises, Docker, CI/CD with GitHub Actions, structured logging, observability
- **Fintech Domain:** investment instrument lifecycles (T-bills, bonds, commercial paper), interest computation engines, double-entry settlement, KYC and AML workflows, payment gateway integration (Paystack), webhook reconciliation, core banking integration (Finacle), SWIFT MT/MX, ISO 20022, CBPR+
- **Product & Delivery:** end-to-end product ownership, solution architecture, design systems, API contract design, schema-first development, multi-tenant SaaS, mobile-first UX, third-party integration discipline, enterprise stakeholder management

**TOOLS & PRACTICES**

---

- **AI-augmented development:** Active practitioner of Claude Code (terminal/CLI agentic coding), Claude for architecture and design conversations, and GitHub Copilot in-IDE. Use these tools for rapid prototyping, code review, refactoring, and exploring design alternatives. Comfortable separating where AI accelerates work and where production-critical code needs human judgement.

## EDUCATION & CERTIFICATIONS

---

**MSc, Information Technology** • University of Lagos

2020 – 2023

**B.Eng, Electrical and Electronics Engineering** • University of Ilorin

2011 – 2016

- **Certified Scrum Master** (International Scrum Institute)
- **Certificate in IT** (British Computer Society)