

Lagos, Nigeria

[Linkedin](#)

# Ayomide Wilfred Adeyemi

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[Portfolio](#)

I am a **back-end** software engineer with additional expertise in DevOps. With over 4 years of experience, I have worked with startups on diverse projects, ranging from web RESTful APIs to asynchronous microservices and modern cloud-native deployments. Proficient in Node.js development using various frameworks, I have also led and mentored multiple development teams, helping them deliver successful projects while enhancing their software engineering practices.

## Work Experience

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<b>Software Engineer</b>	<b>Independent Purchasing Company</b>	<b>Sep 2025 – Present (Full-Time)</b>
Backend team	Lagos, Nigeria	
<ul style="list-style-type: none"><li>• Architected a modular backend system with 50+ domain modules using NestJS, implementing clean architecture principles across logistics, payments, authentication, orders, and notifications</li><li>• Set up a distributed queue system using BullMQ and Redis to process 10+ specialized job queues for financial transactions, settlements, and notifications with exponential backoff retry logic and 99.9% uptime</li><li>• Built multi-provider payment processing system integrating Paystack and 9JaPay with webhook signature verification, virtual account management, idempotency controls, and MongoDB ACID-compliant transactions — processing millions in financial transactions at 99.99% data consistency</li><li>• Scaled real-time logistics tracking using Redis-backed Socket.IO adapter with Redis geospatial indexing, enabling multi-instance WebSocket deployments with 100MB payload optimization for live rider location updates across 1000+ concurrent connections</li><li>• Led development of enterprise real-time messaging platform with Socket.IO featuring multi-device support, distributed conversation management, multi-channel notifications, and custom WebSocket decorator framework — serving 10,000+ concurrent users with sub-second latency</li><li>• Designed and shipped the B2B Integration Platform — a self-serve REST API that lets external platforms (food aggregators, marketplaces, e-commerce stores) push real delivery orders into Relay Pilot. Includes signup with sandbox + live API keys, quote-based dispatch, HMAC-signed webhook delivery, and pre-paid wallet billing.</li></ul>		
<b>Software Engineer</b>	<b>Luftsocial</b>	<b>May 2025 – Sep 2025 (Freelance)</b>
Backend team	Upwork	
<ul style="list-style-type: none"><li>• Architected scalable microservice-ready backend with 20+ domain modules using NestJS, implementing Domain-Driven Design principles and maintaining 95% code modularity across subscription, AI, and platform integration domains.</li><li>• Integrated a multi-provider payment abstraction layer unifying Stripe and Paystack with a single webhook processing pipeline, handling 15+ payment event types and achieving 99.95% transaction reliability</li></ul>		

- Integrated LangChain and OpenAI with custom credit tracking, subscription-based usage limits, and real-time consumption monitoring — maintaining 99.8% service availability across AI-powered features
- Configured an enterprise-grade queue processing system handling 10+ specialized queues with BullMQ, implementing exponential backoff retry strategies and reducing webhook processing failures by 85%.
- Contributed to containerized deployment workflows using Docker-based deployment pipeline with multi-environment configurations, implementing health checks and reducing deployment time by 75% across dev/staging/prod.
- Built real-time messaging system using Socket.IO with 20+ typed event handlers, room-based broadcasting, multi-device support (8 concurrent connections per user), offline message sync, and full message lifecycle features including typing indicators, read receipts, and emoji reactions — supporting 10,000+ concurrent users

## Software Engineer

### Verify Your Customer

Feb 2025 – Present (Contract)

Backend team

Lagos, Nigeria

- Implemented authentication covering JWT tokens, role-based access, and Google OAuth — handling secure login for 10,000+ users
- Architected event-driven webhook delivery system using Bull Queue and Redis, processing 1000+ asynchronous jobs with 99.9% delivery reliability through exponential backoff retry logic.
- Engineered advanced TLS certificate pinning system with public key verification and custom CA chain validation, eliminating man-in-the-middle attack vectors for critical webhook communications.
- Designed and implemented comprehensive database abstraction layer with dynamic query building, reducing code duplication by 60% across 12+ data models while improving query performance.
- Integrated Stripe Payment Intents API processing \$10K+ in monthly transactions with metadata tracking and automated subscription activation

## Software Engineer

### Uwana Energy

June 2024 – January 2025

Backend team

Lagos, Nigeria

- Architected scalable Node.js REST API using clean layered architecture (Controllers, Services, DAO), organising 45+ controllers across domain-driven business modules and enabling parallel development across teams
- Implemented multi-database architecture supporting MySQL, PostgreSQL, and SQLite using Sequelize ORM, enabling flexible deployment across development, staging, and production environments.
- Integrated Paystack payment gateway with webhook signature verification, dynamic fee calculation, and escrow management, processing \$50K+ in transactions at 99.9% uptime
- Architected scalable email service with template engine supporting 15+ transactional emails, processing 5,000+ daily emails with 98% delivery rate using Nodemailer and Mustache.
- Built end-to-end GitLab CI/CD pipeline using GitLab CI with Docker containerization, automated deployments to AWS ECS, and image cleanup, reducing deployment time by 75%

- Developed BaseDAO abstraction layer with dynamic query building, pagination, and transaction support, reducing database code duplication by 70% across 40+ models

## **Software Engineer**

### **Sokozuri Africa**

**August 2024 – May 2025 (Contract)**

Backend team

Lagos, Nigeria

- Designed and implemented scalable MVC architecture with layered separation of concerns, improving code maintainability and enabling parallel development across team members
- Developed a seamless payment processing system, integrating Paystack payment gateways to facilitate smooth and secure transactions, improving transaction success rates by 25% and reducing payment-related issues by 15%.
- Developed real-time messaging system using Socket.io with user presence tracking and online status management, enabling instant communication for thousands of concurrent users
- Engineered Redis caching layer with automatic response interception and 1-hour TTL, reducing database load by 60% and improving API response times from 500ms to 150ms
- Architected and managed 36+ database migrations with complex relational schemas supporting multi-vendor e-commerce operations, ensuring data integrity across 15+ interconnected entities
- Integrated cloud storage solutions (AWS S3 / DigitalOcean Spaces) with secure file upload handling using pre-signed URLs, supporting 30 MB uploads and managing 10,000+ product images at scale.
- Built transactional email system with template engine and OTP generation, sending 5,000+ emails daily for user verification and notifications with 98% deliverability rate

## **Software Developer**

### **Nupat Technologies**

**Sep 2023 – June 2024**

Backend team

Lagos, Nigeria

- Architected a modular Node.js/Express backend using MVC pattern with clear separation of routes, controllers, and models for improved maintainability and scalability.
- Mentored interns at Nupat Technologies, guiding them in setting up codebases, managing databases, configuring cloud environments, implementing DevOps practices, and adhering to software development principles.
- Designed and implemented database schema using Sequelize ORM with PostgreSQL, establishing proper model relationships and implementing database migrations for schema evolution.
- Implemented comprehensive API documentation using Swagger/OpenAPI standards with automated endpoint documentation and interactive API explorer.
- Integrated Paystack payment gateway for secure online payment processing with proper error handling and transaction verification.
- Containerized application using Docker with docker-compose for database services and environment-based configuration management.
- Implemented comprehensive security measures including bcrypt password hashing, JWT authentication, environment variable management, and CORS protection.

- Developed sophisticated business logic for automatic matriculation number generation with class-based sequential numbering and course grade calculation system.

## Software Developer

### Qoinpal

May 2021- July 2022

Backend team

Remote

- Architected a multi-blockchain cryptocurrency service using modular Go packages, implementing clean separation between blockchain-specific logic, database operations, and API layers for enhanced maintainability.
- Developed secure cryptocurrency wallet generation system implementing ECDSA key pairs, multi-stage hashing algorithms (SHA256, RIPEMD160, Keccak256), and proper address encoding for Bitcoin and Ethereum networks.
- Designed and implemented RESTful API endpoints with proper HTTP status codes, structured JSON responses, and comprehensive error handling for multi-blockchain wallet generation services.
- Integrated BadgerDB embedded database for persistent wallet storage, implementing transaction-based operations with proper error handling and data consistency guarantees.
- Established production-ready development environment with environment variable management, structured logging systems, and automated build processes using Makefile for streamlined deployment.
- Integrated specialized blockchain libraries (btcsuite, go-ethereum) and Gin HTTP framework to build comprehensive cryptocurrency wallet generation system with minimal external dependencies.

## Technologies and Languages

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- Languages: JavaScript, TypeScript, Node.js, Python.
- Storage: MySQL, Postgres, MongoDB, S3, Redis, Minio.
- Orms: Sequelize, TypeORM, Prisma, Mongoose, sqlalchemy.
- Platforms: Azure, Docker, Amazon Web Services (AWS), Digital Ocean, Vercel, Heroku, Notion.
- Frameworks: Express, Nest.js, FastAPI, Multer, Websocket.
- Payments: Paystack & Stripe API integration.
- Tools: Postman, Git.

## Education and Certifications

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- **B.Eng. Electrical and Electronics Engineering**, Kwara State University, Nigeria. **2018 – 2022**
- **Quantium Software Engineering** - Quantium **2024**
- **AWS APAC Solutions Architecture** **2024**
- **Azure Kubernetes Service** - KodeKloud **2024**
- **Cisco Software Engineering** - Cisco **2022**
- **Accenture North America Virtual Coding Experience** - Forage **2022**

## Projects and Blogs

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- **IP-Analyzer**- IP Analyzer is a tool that provides users with essential information about their public IP address and latency details, empowering them to make informed decisions. Designed with scalability in mind, the system's modular architecture enables seamless integration of new data points as needed, future-proofing its capabilities. See the source on [Github](#).
- **Verify Your Customer** - Built a backend solution to detect forged IDs, and verify IDs in seconds.

- [How to build a QR code generator for Urls with Node.js, Next.js, and azure blob storage](#)
- [How to run a postgres database in azure kubernetes service and integrate it with a Node.js express application](#)
- [A guide to connecting to postgresql with supabase and sequelize orm.](#)

## Interests

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- **Artificial Intelligence and Machine Learning** – Passionate about building intelligent systems and exploring AI's transformative potential across industries.
- **Microservices Architecture** – Advocating for modular, maintainable system designs for seamless deployment and scaling.
- **DevOps and CI/CD Pipelines** – Committed to automating workflows and ensuring seamless development-to-production transitions.
- **Software Design Patterns** – Leveraging proven design principles for building robust, maintainable software solutions.
- **Serverless Architectures** – Exploring the potential of serverless technologies for cost-effective, event-driven solutions.
- **Exploring Blockchain Technology** – Staying updated on the latest advancements and innovations in decentralized finance and blockchain ecosystems.
- **IoT and Smart Devices** – Enthusiastically exploring the intersection of software and hardware in building connected systems for smarter living.