

FREDRICK ANYANWU

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PROFILE

Results-driven backend engineer focused on building scalable, secure, high-performance systems. Experienced leading engineering teams and designing server-side architectures, RESTful APIs, database optimization, and authentication/authorization systems. Core stack: Node.js, Express.js, NestJS, MongoDB, PostgreSQL, and FastAPI, with additional experience in React.js for frontend integration.

PROFESSIONAL EXPERIENCE

Backend Engineer — *PsychSpace* 02/2026 – Present | Canada

- Architected and built two interoperating backend services: a NestJS/MongoDB product API and a Django/PostgreSQL scoring engine, communicating via RS256-signed service-to-service JWTs.
- Designed the core data model across users, businesses, test content, commerce, and assessment attempts, using the native MongoDB driver (no ODM) with migrate-mongo for schema/index management.
- Built the psychometric scoring pipeline in the Marker service, aggregating session responses and returning scored profiles back to the API for persistence.
- Implemented role-based access control, S3-compatible file uploads, Swagger documentation, and structured logging across the platform.

Backend Engineer | Engineering Team Lead — *Claymore Limited* 12/2024 – 01/2026 | Lagos, Nigeria

- Led an engineering team through sprint planning, task allocation, and code review as Engineering Team Lead.
- Architected RESTful APIs and database schemas for stakeholder management, project tracking, workstreams, and case handling (Stakeholders Connect platform).
- Built a real-time chat and notification system using Socket.io, and implemented JWT-based authentication with role-based access control.
- Optimized MongoDB queries and schema design to improve scalability under production load.
- Owned CI/CD pipelines and deployment on AWS, alongside data validation/error-handling layers using Joi.

Backend Developer (Intern) — *TechVibes Ltd* 07/2024 – 09/2024 | Abuja, Nigeria

- Built RESTful APIs for ride requests and fare calculation using Google Maps/Mapbox integration (Swift Ride platform).
- Implemented WebSocket-based real-time driver location streaming for live ride tracking.
- Built multi-factor authentication (SMS, email, authenticator app) and JWT authorization across all endpoints.
- Designed driver/vehicle registration endpoints with asynchronous, batch image processing via Cloudinary.

Backend Developer — *SustainaFinance DataNexus* 01/2024 – 01/2025 | Esch-sur-Alzette, Luxembourg

- Built data pipelines to ingest, harmonize, and validate ESG scores, financial statements, and sustainability metrics from multiple sources and countries.
- Implemented real-time calculation and analysis logic for ESG and financial metrics using scalable database architecture.
- Applied security and data governance controls to ensure data integrity and regulatory compliance.

Backend Developer — *Padding Technologies* 01/2024 – 03/2025 | Lagos, Nigeria

- Built scalable backend services for the Evolution and Officing products using Node.js, Express, and PostgreSQL.
- Designed and optimized relational database schemas and complex SQL queries.
- Wrote unit/integration tests to catch defects early and maintained technical documentation for team handoff.
- Collaborated cross-functionally with frontend, design, and product to ship cohesive features.

Backend Developer (Intern) — *HNG Tech* 06/2023 – 10/2023

- Built the backend server for a screen-recording Chrome extension, handling real-time data efficiently.
- Contributed to an authentication microservice and a payment microservice for a large e-commerce platform.

Full-Stack Developer (Intern) — *Elatech Limited* 06/2022 – 09/2022 | Lagos, Nigeria

- Developed a weather application, gaining hands-on experience with third-party API integration.
- Built a Paystack clone replicating core payment workflows, including live Paystack API integration.

PROJECTS

OpenRDB Studio

- Built a free, open-source, cross-platform desktop GUI for relational databases using Rust, Tauri, React, and TypeScript.
- Designed a native SQL client with a modern, unrestricted developer experience as an alternative to closed-source database tools.
- Implemented database connectivity and query execution using SQLx for type-safe, async database access in Rust.

MarketLens AI

- Built an AI-powered stock decision support system that analyzes market trends and real-world signals using FastAPI and Python.
- Trained and deployed machine learning models (Random Forest, LightGBM) to generate data-driven stock market insights.
- Designed the backend data layer on PostgreSQL to store and process financial/market data for model input.

PropSpaceX

- Built a microservice-based real estate management platform combining Web2 and Web3 architecture using Node.js, MongoDB, PostgreSQL, and gRPC.
- Implemented decentralized property ownership verification via Ethereum smart contracts.
- Designed hybrid authentication supporting both traditional email/password and blockchain wallet login.

EchoLoc

- Built a privacy-first live location sharing app (Expo/React Native) enabling users to share location with a group only for a user-defined time window, rather than always-on tracking.
- Implemented timed sharing sessions with start/stop controls, automatically ending location sharing when the timer expires or the user stops it manually.
- Built group creation, invites, and in-group chat to support event-based, temporary sharing circles.
- Integrated a live map view showing real-time member locations, powered by Socket.IO communication with a custom backend (Echo_API).
- Implemented authentication via email and Google/Apple sign-in.

EDUCATION

BSc, Computer Science — *Veritas University* 10/2022 – Present | Abuja, Nigeria

- Relevant coursework: Algorithms & Data Structures, Database Systems, Software Engineering.

SKILLS

Languages: JavaScript, TypeScript, Python

Backend & Frameworks: Node.js, Express.js, NestJS, FastAPI, Django, Socket.io

Databases: PostgreSQL, MongoDB, MySQL, Knex.js, Database Design

Frontend: React.js, HTML, CSS, Tailwind CSS

Architecture & Systems: Microservices Architecture, System Design, Authentication Systems (JWT, RBAC), gRPC

DevOps & Cloud: AWS, DigitalOcean, CI/CD

Testing & Practices: Test-Driven Development, Functional Testing, Usability Testing, Code Refactoring

Tools: Git, GitHub, Jira, Trello