MADU EDDY CHIDIEBERE

Senior Backend Engineer | Systems Architect (Fintech & AI)
Ikeja, Lagos, Nigeria
+234 907 521 9854 | eddymadu90@gmail.com
LinkedIn: linkedin.com/in/eddy-madu | GitHub: github.com/eddy-bob

PROFESSIONAL SUMMARY

Senior Backend Engineer and Systems Architect with 6+ years of experience designing, scaling, and securing high-throughput fintech and data-intensive platforms. Deep expertise in distributed systems, wallet and ledger architectures, payment orchestration, event-driven microservices, and AI-powered backends. Proven record of eliminating race conditions, ensuring financial consistency, and optimizing systems processing tens of thousands of transactions monthly across global teams.

CORE BACKEND SKILLS

Languages & Frameworks: TypeScript, JavaScript, Python, Node.js, NestJS, Express.js
Databases & Storage: PostgreSQL, MySQL, MongoDB, TypeORM, Redis
Architecture: Microservices, Event-Driven Systems, Domain-Driven Design, RBAC, REST & GraphQL APIs, Concurrency Control
Messaging & Jobs: RabbitMQ, BullMQ, Redis Streams
Payments & Security: Stripe, Paystack, Flutterwave, NMI, Checkbook, Kount, JWT, 2FA, Rate Limiting
AI & Data: LangChain, LangGraph, Pinecone, OpenAI, RAG Pipelines
DevOps & Cloud: Docker, AWS (EC2, S3), GCP (Compute Engine, Cloud Run), DigitalOcean, Nginx, CI/CD

PROFESSIONAL EXPERIENCE

Senior Backend Engineer / Systems Architect

Endow — Wellington, Delaware (Remote)
Jun 2025 – Present

- Architected and launched a wallet and transaction management system processing **tens of thousands of transactions per month** with strict financial consistency guarantees.

- Eliminated negative-balance incidents by implementing **atomic withdrawals, row-level locking, and idempotent transaction flows**, reducing concurrency-related failures to zero.
- Designed a **secure B2B Partner API platform** with public/private key authentication, IP whitelisting, environment isolation (sandbox vs production), and detailed audit logging.
- Improved API and analytics performance by up to **15×** through query optimization, Redis caching strategies, and background workers.
- Built a **NestJS-based microservice ecosystem** communicating via RabbitMQ with secure service-to-service authentication.
- Designed and owned a **creator revenue and split-funds engine**, supporting multi-owner products and automatic payout distribution.
- Re-architected analytics pipelines using **pure SQL aggregation**, achieving ~80% performance improvement and significant infrastructure cost reduction.
- Leading development of an **AI-powered Financial Advisor**, implementing RAG-based conversational workflows, intent detecting and handling such as transactions management, transfer money work flow, manage beneficiaries work flow etc using LangChain, LangGraph, Pinecone, and OpenAI.

Backend Engineer (Contract)

Prime Core Solutions — Houston, TX (Remote)
Jul 2025 – Present

- Built a production-grade **fraud detection and risk scoring system** using Kount with real-time device fingerprinting.
- Implemented automated **KYC workflows** and risk-based fund hold and release mechanisms.
- Integrated **NMI (deposits)** and **Checkbook (withdrawals)** with cryptographic signature verification and reconciliation pipelines.
- Designed and enforced **RBAC, rate limiting, and request throttling** across internal and public APIs.
- Developed backend services powering admin and operations dashboards for transaction monitoring and compliance.

Senior Backend Engineer

Buzzz inc — Lagos (Remote)

July 2022 – September 2025

- **Designed and implemented** a scalable, modular backend architecture supporting complex workflows including order processing, contributor roles, gift flows, and wallet management.
- **Built high-performance data pipelines** and queue-based processing, enabling reliable background jobs, print fulfillment, and automated refunds.
- Optimized core data structures and algorithms for **search**, **filtering**, and **sorting**, improving query efficiency and reducing response times by over 20%.
- **Engineered real-time notification** and state synchronization systems to deliver instant updates across distributed services.
- **Led infrastructure redesign** to support **auto-scaling**, **fault tolerance**, and **cost efficiency**, while maintaining high availability under load.
- **Developed security** and access control frameworks, including multi-factor authentication, login limits, and account suspension policies, ensuring data integrity and compliance.

Backend Engineer

Binary Agency — Remote
Sep 2021 – May 2022

- Designed scalable backend services with fine-grained RBAC and real-time system updates.
- Migrated CI/CD pipelines to **Dockerized GCP workflows**, improving deployment reliability and rollback safety.

Backend Developer

McJohnsons Limited — Nigeria
Feb 2021 – Aug 2021

- Built subscription-based backend APIs with caching strategies that significantly improved response times.
- Collaborated with frontend teams to stabilize APIs and reduce production incidents.

EDUCATION

B.Sc. Electrical & Electronics Engineering
Imo State University, Nigeria
Feb 2019 – Sept 2024