Ifeanyi Christopher Nwagbara

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Summary

Experienced Backend & AI Engineer with 7+ years of expertise in architecting and delivering high-performance, scalable distributed systems. Proven ability to lead full-cycle development of complex platforms across diverse domains including energy, fintech, e-commerce, and regulatory compliance. Specializes in integrating AI and machine learning solutions-including OpenAI GPT, vector search (pgvector), and semantic reasoning-into core business applications to drive automation, generate insights, and create intelligent user experiences. A collaborative leader focused on optimizing system reliability, reducing costs, and mentoring teams to elevate code quality and accelerate delivery.

Notable Projects

AI Energy Chat-bot & Semantic Search (Wyre Nigeria Limited)
- Led design and implementation of an AI assistant using OpenAI GPT-4 and pgvector for semantic search over energy reports and telemetry.
- Implemented prompt management, context retrieval, and vector search pipelines to provide accurate, contextual answers to operational queries.

AI Powered GRC System (Mitiget Assurance and Technology Service)
- Built an executive-facing assistant that synthesizes compliance data, generates action items, and prioritizes risks.
- Implemented workflows and summarization logic to reduce time-to-insight for compliance teams.

Payment Management & School Fees System (Mitiget Assurance and Technology Service)
- Architected backend and reconciliation pipelines for multi-provider payment integrations (PayPal, Flutterwave), ensuring transactional integrity and auditability.
- Delivered reconciliation logic and reporting that reduced payment discrepancies and sped up settlements.

Technical Skills

Languages & Frameworks:
Python, Flask, Django REST Framework (DRF), FastAPI, React.js

API & Architecture:
RESTful APIs, API design, middleware, JWT authentication, RBAC, microservices patterns

Databases & Search:
PostgreSQL, MySQL, SQLite, MSSQL, pgvector, semantic/vector search

DevOps & Infrastructure:
Docker, CI/CD (GitHub Actions), automated testing, deployment pipelines, monitoring & logging

Tools & Collaboration:
Git, GitHub, Agile development, code reviews, unit/integration testing, Jira, Trello

Other:
Object-oriented design, performance tuning, security best practices, prompt engineering

Education

Bachelor of Engineering
Electronic and Computer Engineering
University of Nigeria, Nsukka – 2014

Links

- GitHub   - https://github.com/IfeanyiXtopher
- Portfolio   - https://ifeanyixtopher.github.io/personal-website/
- LinkedIn   - https://www.linkedin.com/in/ifeanyi-nwagbara381165127

Work history

Lead Backend Engineer — *September 2023 – Present*

Wyre Nigeria Limited, Lagos

- Architected and led the development of a cutting-edge, AI-powered Energy Management SaaS platform, transforming raw telemetry data into actionable business intelligence.

- Engineered an intelligent AI chat-bot utilizing OpenAI GPT-4 and a pgvector-based semantic search pipeline, enabling natural language querying across millions of data points (energy reports, fuel logs, CO2 analytics) and reducing data retrieval time for operational teams by over 70%.

- Designed and implemented a robust multi-tenant architecture with JWT authentication and Role-Based Access Control (RBAC), ensuring secure data isolation for enterprise clients and internal branches.

- Developed advanced real-time aggregation algorithms for energy consumption, diesel usage, and carbon footprint analytics, significantly enhancing operational decision-making and sustainability reporting.

- Automated the generation of analytical reports and predictive maintenance alerts using AI, slashing manual reporting efforts by approximately 80% while drastically improving data accuracy.

- Orchestrated high-availability deployments and integrated multiple third-party APIs (payment gateways, monitoring tools), maintaining 99.9% system uptime and ensuring a fault-tolerant, reliable user experience.

Team Lead (Software Development) – *06/2020 to 08/2023*
Mitiget Assurance and Technology Services Limited, Ikeja, Lagos

- Led, mentored, and managed a high-performing team of 5 software developers, introducing and championing agile methodologies that increased team velocity and consistently resulted in projects being delivered ahead of schedule.

- Spearheaded the design and development of an AI-driven Governance, Risk, and Compliance (GRC) platform. Integrated OpenAI's API to synthesize complex compliance data, automatically generate executive summaries and action items, and prioritize risks, reducing the time for compliance teams to gain critical insights.

- Architected a full-stack Payment Management & School Fees System from the ground up, featuring seamless integrations with multiple payment providers (PayPal, Flutterwave) and building automated reconciliation pipelines that reduced transaction discrepancies and accelerated settlement times.

- Delivered a scalable enterprise e-commerce solution with a React frontend and Django REST Framework (DRF) backend, complete with a secure, integrated payment processing system.

- Improved overall team output and code quality by establishing development standards, creating reusable templates, and implementing efficient CI/CD practices. These initiatives reduced code-review overhead by an estimated 20 hours per week.

Software Engineer – *09/2017 to 05/2020*
Sabrud Consortium Nig LTD
(Leading manufacturer of single-phase and three-phase prepaid meters in Nigeria, Awka)

- Developed and maintained critical backend services for a SaaS energy management platform using Python, Flask, and MySQL, supporting the business of a leading Nigerian prepaid meter manufacturer.

- Automated key business and operational processes, replacing manual, error-prone workflows which resulted in a 30% reduction in server downtime and improved system reliability.

- Engineered a secure wallet and transaction tracking system that enhanced financial transparency for thousands of users, leading to a 55% reduction in customer complaints related to billing and transactions.

- Strengthened application security and data integrity by implementing robust data validation and adopting ORM best practices, effectively mitigating SQL injection and other critical vulnerabilities.

- Contributed directly to product improvements that enhanced customer satisfaction and operational efficiency, helping to drive an approximate 75% increase in company sales.