

# Chimaobi David Ibe

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## Professional Summary

**Software Engineer • Full stack Developer** with extensive experience architecting and delivering scalable, production-ready APIs and web applications. Proven expertise in Python (FastAPI/Flask) and Node.js ecosystems, with a strong focus on system design, cloud infrastructure, and ML model integration. Specialized in building robust backend services, seamless frontend experiences, and deploying containerized applications across modern cloud platforms.

## Technical Skills

### Backend Development

- Python: FastAPI, Flask, Pydantic, RESTful API design
- Node.js: Express.js, JWT authentication, middleware development
- API Architecture: REST APIs, microservices, async/await patterns

### Frontend Development

- React, Next.js, Vite
- TypeScript, JavaScript (ES6+)
- Tailwind CSS, responsive design
- State management, React Query, Axios

### Machine Learning & Data

- Hugging Face Transformers
- PyTorch
- Model inference integration
- Emotion classification, NLP

### Databases

- PostgreSQL (Supabase)
- SQLite
- Database design and optimization

### DevOps & Cloud

- Containerization: Docker, Docker Compose
- Orchestration: Kubernetes
- Cloud Platforms: Vercel, Railway, Render, Fly.io
- CI/CD pipelines, deployment automation

### Tools & Technologies

- Version Control: Git, GitHub
- Payment Integration: Paystack
- Email Services: Resend
- Data Visualization: Recharts, Chart.js
- Testing & Debugging

## Professional Experience

### Backend & Full-Stack API Development | Content Discovery Platform

- Architected and implemented high-performance FastAPI REST APIs with comprehensive Pydantic models for data validation and serialization

- Designed and developed advanced search endpoints with optimized query performance and filtering capabilities
- Integrated multiple external content APIs with robust error handling and rate limiting
- Built AI-powered chat endpoint with streaming capabilities for real-time user interactions
- Created comprehensive containerization strategies and deployment documentation for PaaS and container hosting platforms
- Ensured API scalability and reliability through proper async/await patterns and database optimization

### **Real-Time Media & Audio Workflows | Voice/Social Platform**

- Engineered backend endpoints for media upload, processing, and streaming with support for multiple file formats
- Implemented client-side audio handling with Web Audio API integration for real-time processing
- Developed secure authentication flows using JWT tokens and role-based access control (RBAC)
- Built secure file storage system with cloud integration and CDN optimization
- Designed and implemented real-time features using WebSockets for live audio interactions
- Ensured data security and compliance with best practices for handling user-generated content

### **Corporate Website & Payments Integration | E-Commerce Platform**

- Developed modern, responsive Next.js marketing website with server-side rendering (SSR) and static site generation (SSG)
- Integrated Paystack payment gateway with webhook handling for secure transaction processing
- Implemented email automation workflows using Resend for transactional and marketing emails
- Built reusable component library with TypeScript for consistent UI/UX across the platform
- Optimized performance with code splitting, lazy loading, and image optimization
- Deployed and maintained production infrastructure on Vercel with CI/CD integration

### **ML Inference & Analytics | AI-Powered Analytics Platform**

- Integrated Hugging Face emotion classification models into production backend services
- Built scalable inference endpoints with model caching and batch processing capabilities
- Developed real-time React analytics dashboard with interactive data visualizations using Recharts
- Implemented data pipeline for processing and aggregating emotion classification results
- Created API endpoints for historical data retrieval and trend analysis
- Optimized model inference performance to handle high-volume requests efficiently

### **Enterprise Admin Dashboard & Backend | Enterprise SaaS Platform**

- Built comprehensive frontend visualizations for complex rule management systems
- Developed backend telemetry APIs for real-time monitoring and alerting
- Implemented rule engine with configurable business logic and validation
- Created real-time monitoring dashboards with live data updates
- Designed and implemented API endpoints for rule CRUD operations with audit logging
- Ensured system reliability through comprehensive error handling and monitoring

## **Education & Certifications**

### **Education**

BSc Industrial Chemistry — Enugu State University of Science and Technology

### **Certifications**

- Building Generative AI Powered Applications with Python — Coursera
- Developing AI Applications with Python and Flask — IBM
- Generative AI & LLMs: Architecture & Data Preparation — IBM
- Machine Learning with Python — IBM

### **Availability**

Software development, frontend, backend, fullstack, etc.

## **Additional Information**

- Strong problem-solving skills with a focus on clean, maintainable code
- Experience working in agile development environments
- Passionate about building scalable systems and optimizing performance
- Active contributor to open-source projects and technical communities