OKORIE CYNTHIA KALU

Backend Developer — Python | FastAPI | PostgreSQL

⚲ Port Harcourt, Nigeria | 🌐 Open to Remote & Relocation

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PROFESSIONAL SUMMARY

Backend developer with a strong foundation in Python, FastAPI, and PostgreSQL, specialising in building and deploying production-grade REST APIs. Combines 7 years of professional experience in education and administration with a growing portfolio of AI-powered backend systems. Completed ALX Backend Engineering programme. Brings healthcare domain knowledge, attention to detail, and a track record of shipping real, working software to production.

TECHNICAL SKILLS

Languages: Python **Frameworks:** FastAPI, SQLAlchemy 2.0 (async) **Databases:** PostgreSQL **Authentication:** JWT, Google OAuth 2.0 **AI/ML:** OpenAI GPT-4o-mini, prompt engineering **Background Tasks:** Celery, Redis **Email:** Resend API **Tools:** Git, GitHub, Alembic, Docker, Postman **Cloud:** Render **Other:** REST API design, rate limiting, database migrations, SSE streaming

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PROJECTS

🏥 MediBook API — Smart Healthcare Appointment System

FastAPI · PostgreSQL · OpenAI · Celery · Redis · Render **Live:** medibook-api-9xi4.onrender.com/docs | **GitHub:** github.com/CynthiaKaluson/medibook-api

- Built and deployed a full production REST API for healthcare appointment booking, serving clinics and patients with role-based JWT authentication and Google OAuth

- Implemented AI-powered slot suggestion engine using GPT-4o-mini that analyses patient symptoms and recommends appointments by urgency level (low/medium/high)

- Built MediBot — a context-aware patient chatbot with persistent conversation history, secured with rate limiting (10 req/min) to prevent API credit abuse

- Engineered atomic slot-locking to prevent race conditions during concurrent bookings, and transactional conflict detection to prevent double-booking

- Integrated automated email notifications (confirmation, cancellation, 24h reminders) via Resend with non-blocking failure handling

- Added production hardening: 15s OpenAI timeout, 2-retry logic with 5s delay, and structured error logging

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⬛ Cerebro — Real-Time AI Conversation API

FastAPI · PostgreSQL · OpenAI · SSE · JWT · Docker · Render **GitHub:** github.com/CynthiaKaluson

- Built a real-time AI dialogue API where users create persistent idea threads and engage a Socratic AI partner that challenges assumptions and deepens thinking

- Implemented token-by-token streaming responses over Server-Sent Events (SSE) for real-time AI output

- Secured with JWT authentication; all conversations stored and retrievable via PostgreSQL; deployed as a containerised service on Render

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⬛ ScholarIQ AI — Academic Writing API

FastAPI · OpenAI · API Key Auth · Rate Limiting **GitHub:** github.com/CynthiaKaluson/scholariq-ai

- Built an API-first backend for AI-assisted academic writing generation with citation validation, API key authentication, and rate limiting

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EDUCATION & CERTIFICATION

ALX Backend Engineering Programme — 2024 *Intensive software engineering programme covering Python, backend systems, APIs, and deployment*

Postgraduate Diploma — Public Health University of Port Harcourt

Higher National Diploma — Environmental Health *Relevant: healthcare systems knowledge applied to MediBook project*

PROFESSIONAL EXPERIENCE

School Administrator & Classroom Teacher — Various Institutions, Port Harcourt *2017 – 2024 (7 years)*

- Managed administrative operations for school systems serving hundreds of students

- Developed curriculum materials and delivered structured learning programmes

- Built strong communication, organisation, and leadership skills across high-pressure environments

Online Transcriber — Freelance *2020 – 2022*

- Delivered accurate transcription under tight deadlines, developing attention to detail and remote work discipline

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ADDITIONAL

- Actively building in public on GitHub and X (Twitter) — shipping, receiving feedback, and iterating in real time

- Open to junior backend developer, Python developer, and API developer roles

- Available immediately