

STEFANO NEBO

Backend Engineer | Node.js · NestJS · TypeScript | AI & LLM Integration | Distributed Systems

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Lagos, Nigeria · Open to remote international roles

PROFILE

Backend engineer with 4+ years building and shipping production systems across healthcare, fintech, and logistics. Specialises in microservices architecture, event-driven pipelines, and AI/LLM integration into backend infrastructure. Brings a rare combination of deep systems engineering and real-world AI deployment experience — having built HIPAA-compliant transcription services, RAG pipelines with vector search, and voice-driven LLM orchestration systems in production environments.

Prior experience embedded within a business development team gives additional perspective on how technical decisions translate into commercial outcomes — a quality that drives engineering work toward measurable business impact rather than technical correctness alone.

PROFESSIONAL EXPERIENCE

Backend Engineer · **VendcliQ** (Contract) Sep 2025 – Present

Lagos, Nigeria · Remote

Built the core backend infrastructure for a last-mile logistics and payments platform operating across Nigeria.

- ▶ Engineered fault-tolerant notification hub using RabbitMQ processing 50,000+ daily messages across 8 microservices, cutting delivery failures from 15% to <1% via automated retry mechanisms and dead-letter queue management.
- ▶ Architected end-to-end logistics platform handling 1,000+ daily trip requests — automating rider-vehicle matching and payment processing, reducing manual coordination from 4 hours to 15 minutes per shift.
- ▶ Integrated payment gateway processing ₦5M+ monthly transactions with wallet management and automated disbursements, reducing payment processing errors by 90%.
- ▶ Maintained duplicate ledger for audit compliance, ensuring full financial traceability across all transaction types.

Backend Engineer · **QlipHealth** (Full-time) Nov 2024 – Apr 2025

San Francisco, CA · Remote

Built AI-powered transcription infrastructure for a US healthtech startup serving dental clinics across California.

- ▶ Built HIPAA-compliant transcription service processing 200+ weekly dental consultations at 95% accuracy using OpenAI Whisper and custom medical templates — eliminating 2+ hours of manual documentation per doctor daily.
- ▶ Integrated Zoom C++ SDK with Node.js backend via custom middleware, reducing audio processing latency by 40% and eliminating \$500/month in third-party transcription costs.
- ▶ Reduced transcription infrastructure costs by 60% migrating from NVIDIA NeMo to OpenAI Whisper while improving processing speed by 35%.
- ▶ Developed Flask backend with nginx for DNS routing, accelerating client workflow automation by 80% and reducing environment setup from 2 days to 30 minutes.
- ▶ Designed and maintained multi-tenant architecture ensuring data isolation across clinic accounts while supporting concurrent session processing.

Backend Engineer · **ExamReady** (Contract) Sep 2023 – Nov 2024

Remote

Built the backend systems and adaptive algorithms powering an online exam preparation platform.

- ▶ Built adaptive testing algorithm that dynamically adjusts question difficulty in real-time based on student performance, improving pass rates by 18% and reducing average study time by 25%.
- ▶ Developed analytics dashboard visualising performance trends across 10,000+ exam attempts, enabling students to identify weak areas and improving study efficiency by 30%.

- ▶ Implemented in-platform calculator and support ticketing system, reducing exam disruptions by 70% and improving student satisfaction from 3.2 to 4.5/5.

Backend Engineer & Team Lead · **Inventors Community** (Part-time · Volunteer)
Nigeria · Remote

Jan 2023 – Sep 2024

Led backend engineering for an open-source developer community platform serving 1,000+ members across Nigeria.

- ▶ Led backend team of 6 developers building NestJS/MongoDB lead management system with role-based access control, improving API response times by 40%.
- ▶ Built high-availability email dispatch system with Node.js achieving 99.9% uptime across 1,000+ community members.
- ▶ Increased test coverage from 40% to 90% using Jest, reducing production bugs by 65% and improving deployment confidence significantly.
- ▶ Mentored 3 junior developers through structured code reviews and weekly collaboration sessions, cutting onboarding time from 8 weeks to 4 weeks.

Business Intelligence & Strategy · **Towncriers Limited**
(Internship)
Lagos, Nigeria · On-site

May 2023 – Nov 2023

Worked embedded within a business development team, gaining direct exposure to how data insights translate into client strategy and executive decision-making.

- ▶ Analysed datasets of 50,000+ records to surface market insights that directly influenced campaign targeting strategy for 5+ major clients, improving targeting accuracy by 15%.
- ▶ Automated data cleaning and preparation workflows using Python and Pandas, reducing data preparation time from 8 hours to 2 hours per analysis cycle.
- ▶ Translated technical findings into executive presentations that shaped strategic decisions at C-suite level across 5+ major client accounts.

TECHNICAL SKILLS

Languages: TypeScript / JavaScript (ES6+), Python, C++, SQL, Ruby

Backend Frameworks: Node.js, NestJS, Express, Django, Flask, Ruby on Rails

Frontend: React, Next.js, Angular, Tailwind CSS

Databases: PostgreSQL, MongoDB, Redis, Firebase, MySQL

Cloud & DevOps: AWS (EC2, Lambda, S3), Docker, Kubernetes, GitHub Actions, CI/CD, Linux

AI & ML: OpenAI API, LangChain, NVIDIA NeMo, Whisper ASR, LLM Integration, pgvector, RAG Pipelines

Messaging & Real-time: RabbitMQ, WebSockets, Event-Driven Architecture

Specialisations: Microservices, Distributed Systems, HIPAA Compliance, FinTech, Real-time Processing, Multi-tenant Architecture

Testing: Jest, E2E Testing, Unit Testing, Integration Testing

NOTABLE PROJECTS

Multi-Carrier Shipping Rate Engine — NestJS · TypeScript · OAuth 2.0 · Jest · REST APIs

Production-grade NestJS shipping rate API with UPS OAuth 2.0 integration, automatic token caching and refresh, strategy pattern for carrier extensibility, structured error normalisation, and full E2E test coverage. Demonstrates senior-level architectural thinking and testing discipline.

Repo: <https://github.com/snebo/shipping-rate-calculator>

My Diary Friend — Personalized AI — NestJS · TypeScript · LangChain · pgvector · PostgreSQL · Supabase · Docker
Privacy-first AI diary and personal assistant with semantic memory retrieval via vector embeddings (pgvector + gte-small), LangChain and Google Gemini for LLM orchestration, and full self-hosting support via Docker. Implements a complete RAG pipeline from ingestion to retrieval.

Repo: https://github.com/snebo/Project-personalized_ai

Automatic Speech Recognition System — Python · NVIDIA NeMo · Google Colab (T4 GPU) · nginx
Custom ASR system achieving 96% transcription accuracy with speaker diarisation across 10,000+ audio samples. Integrated Google Drive for dataset management and nginx for state persistence, reducing setup time by 15%.
Repo: <https://colab.research.google.com/drive/14Aci8ILNY5PoZVrnEOEpLqYxffBvHNHF>

Zoom Meeting AI Bot — Node.js · C++ Meeting SDK · Docker · WebSockets · OAuth · AWS
Headless Zoom meeting bot built on the C++ Meeting SDK that autonomously joins meetings, captures and transcribes audio in real-time, stores transcripts with encryption, supports multi-session concurrency, and delivers live updates via WebSockets.
Repo: <https://github.com/snebo/Zoom-Meeting-Bot>

Automated Recruiter Outreach Pipeline — TypeScript · Node.js · Puppeteer · OpenAI API · Twilio
B2B outreach pipeline using Puppeteer for lead scraping, government API verification, and OpenAI Voice for AI-driven cold calls capable of navigating IVR systems and scheduling appointments autonomously.
Repo: <https://github.com/snebo/Automated-Networking-System>

EDUCATION

Bachelor of Technology in Industrial Mathematics 2024
Olusegun Agagu University of Science & Technology, Nigeria
GPA: 3.96 / 5.0

CERTIFICATIONS & TRAINING

CodePath Software Engineering 2024
Python, Data Structures & Algorithms — Intensive programme covering DSA, system design, and full-stack architecture.

NextGen Builders Mentor 2023–2024
Inventors Community — Mentored junior developers through structured technical programmes.

ADDITIONAL INFORMATION

Availability: Open to remote full-time and contract roles with international teams.

Languages: English (fluent)

Portfolio & Work Log: stefano-nebo.vercel.app · GitHub: github.com/snebo