

MOJTABA AHMED

SOFTWARE ENGINEER

PROFILE

Backend engineer specializing in AI integration and voice systems. Built production-grade Whisper fine-tuning pipelines for low-resource Arabic dialects and voice biometric authentication systems for call center clients. Strong in Node.js/NestJS and Python/FastAPI, comfortable owning systems from architecture to deployment across fintech, telecom, and SaaS.

CONTACT

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- [mojtabaahmed.dev](https://github.com/mojtabaahmed)
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- [GitHub](#)
- [LinkedIn](#)

SKILLS

- Backend : Node.js, TypeScript, NestJS, Express, Python (FastAPI)
- Frontend: React, Next.js
- AI/ML: Whisper Fine-tuning, Vector Embeddings, Cosine Similarity, Speech Processing
- AI APIs & Integrations: OpenAI, ElevenLabs, DeepL, Replicate
- Databases: PostgreSQL, MongoDB, Sequelize, Alembic, Mongoose
- Infrastructure: Docker, CI/CD, Digital Ocean, AWS, Azure, Linux/Ubuntu
- Tools: Git/GitHub, MITMProxy, Puppeteer, Stripe, n8n

PERSONAL PROJECTS

1. [PeakTranslate.com](#)

AI translation platform that lets users upload videos/documents and get translated subtitles, voice-over dubbing, and document translation. Subscription-based with Stripe billing.

2. [Stocksphoenix.tech](#)

Stock intelligence terminal that monitors social media for ticker mentions, generates BUY/SELL signals, runs a simulated \$100K portfolio, and produces AI analyst reports.

3. [Nihongo.page](#)

Japanese vocabulary learning app using spaced repetition, AI-powered writing feedback, and weekly personalized audio lessons.

WORK EXPERIENCE

NestJS Backend Developer

Suhub
Riyadh, KSA

October 2024 - Present

- Developed the platform Communities Section including posting, commenting, voting, polls, and home page feed algorithm, serving 19K+ users with single communities reaching 11K+ members.
- Developed the Research Opportunity feature allowing researchers to post research details and receive applications from platform users.
- Developed multi-channel notification systems with "Quiet Hours" feature.
- Designed and implemented External Jobs System aggregating 120+ daily jobs, scraped from Indeed, Naukrigulf, Bayt, LinkedIn, and several hospital career portals.
- Built an E2E testing framework abstraction layer over Puppeteer, adopted by the full frontend team to write UI test scripts with minimal Puppeteer knowledge.

Software Engineer (Contract)

Forward Technology
Khartoum, Sudan

February 2025 - October 2025

- Architected a self-improving Whisper fine-tuning platform for Sudanese Arabic, where human-verified transcripts are automatically chunked into <30s training segments and pushed to a Kaggle dataset, creating a continuous accuracy improvement loop. Onboarded 6+ clients with 11+ hours of verified audio.
- Built a voice biometric authentication system for call center client verification, implementing speaker enrollment via vector embedding, cosine similarity matching with pitch normalization, and a weekly-recalibrated decision threshold derived from cross-enrollment FAR/FRR analysis across the full user dataset.
- Built call sentiment analysis system for banking and telecommunications clients processing Sudanese Arabic customer service conversations.
- Built an automated video translation pipeline for MTN SD's VOD library, processing English→Arabic content with AI-powered transcription and subtitle generation.

Full Stack Developer

Strange Logic Ltd.
Seaford, UK

April 2023 - December 2024

- Developed a web scraping system processing 130K+ daily records from Trace Genie with relational database storage and API layer for data consumption
- Designed and implemented a fully automated system for social media campaigns utilizing AI capabilities.
- Built an unofficial LinkedIn API library via reverse engineering, enabling automated operations without official API credentials.
- Developed an API that worked as a gateway for Replicate AI models. Supporting 17+ AI models and serving more than 200 daily users, N8N-Nodes and microservices per day.
- Built N8N nodes for fetching APIs, AI models, mailing software, media processing and other various uses, consumed in tens of Digital Marketing workflows.

React JS Developer

SolusPay
Khartoum, Sudan

July 2022 - January 2023

- Worked on a Web app that allows smallholder farmers in 2 states (South Kordofan State and Blue Nile State) to trade their products with direct customers.
- Designed and implemented an analytic admin dashboard using React-Admin