

Nguyen Hoang Thach

Software Engineer

037 227 8818

hoangthach.dev@gmail.com

hoangthach.me

GitHub

Ho Chi Minh City, Vietnam

Education

Bachelor of Engineering in IT

Sep 2023 - Present

HCM University of Technology and Engineering

GPA: 3.5/4.0

Coursework: Data Structures & Algorithms, OOP, Database Management, Operating Systems, Computer Networks

Skills

Programming Languages

TypeScript, JavaScript, Java, SQL, Python

Frontend Technologies

React, Zustand, Tailwind CSS, React Query, HTML5/CSS3

Backend Frameworks

Node.js (NestJS, Express.js), Spring Boot

Databases

PostgreSQL, MongoDB, MySQL, Redis

Tools & Cloud

Git, Docker, REST APIs, WebSocket/STOMP, JWT, Cloudinary, BullMQ, Celery

Languages

Vietnamese (Native), English (B1 – TOEIC 600)

Summary

Fullstack developer with experience building web applications and AI-powered systems using React, TypeScript, Node.js, and NestJS. Worked on real-time communication, asynchronous processing, search systems, and LLM-based features through multiple end-to-end projects. Passionate about building reliable and scalable software.

Projects

AI Interview Platform

GitHub

- **Frontend & Real-time UI:** Engineered a responsive, type-safe **React/TypeScript** interface; implemented **Server-Sent Events (SSE)** for real-time AI response streaming, reducing perceived latency.
- **Core AI Engine:** Architected a resume optimization engine performing **CV-to-JD gap analysis** to generate **ATS-friendly resumes** tailored to target job roles.
- **Voice Interview System:** Developed natural AI-to-candidate conversations integrating **STT & TTS**; designed a pluggable AI Provider Layer using the **Strategy Pattern** to prevent vendor lock-in across multiple LLMs.
- **Backend & Evaluation Framework:** Built a rubric-driven assessment framework leveraging **Structured LLM Outputs** and Schema Validation for consistent candidate evaluation.
- **Infrastructure & Background Jobs:** Utilized **Redis** for caching and JWT revocation, alongside **BullMQ** for asynchronous tasks like email delivery and user notifications.
- **Tech Stack:** *React, TypeScript, Tailwind, Node.js, Express.js, MongoDB, Prisma ORM, Redis, BullMQ, SSE, OpenAI/Gemini APIs.*

E-Learning Platform

Live Demo • GitHub

- **Frontend Development:** Built the entire frontend (both client and admin portals) from scratch using **React** and **TypeScript**; integrated REST APIs and implemented **WebSockets** for real-time notifications.
- **Backend & API Design:** Built RESTful APIs using **NestJS** and **Prisma ORM**, enforcing strict request validation and end-to-end type safety with **Zod**; secured via **JWT Authentication** and **RBAC**.
- **Asynchronous Media Pipeline:** Architected a video processing pipeline where clients upload media directly to **Cloudflare R2 via Presigned URLs**, triggering **Celery & Redis** background jobs for **HLS transcoding** and AI-powered multilingual dubbing.
- **Infrastructure & Deployment:** Integrated **Cloudinary** for scalable image optimization and containerized all services using **Docker Compose** to ensure environment consistency.
- **Tech Stack:** *React, TypeScript, Zustand, Tailwind, NestJS, Prisma ORM, PostgreSQL, Redis, Celery, Cloudflare R2, Cloudinary, WebSockets, Docker.*

Activities & Awards

Winner, Best Idea Award – HCMUTE Hackathon 2025

2025

- Awarded for developing "TamTro" — an AI-powered mental health support platform.
- Developed backend RESTful APIs using Node.js and Express.js for authentication, real-time chat, and emotion analysis features.