

Nguyen Viet Linh

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Career Objective

Aspiring backend developer with a strong foundation in web technologies and practical experience in Node.js, Express, and databases. Seeking to further develop backend engineering skills through real-world projects and professional training.

Education

HANOI UNIVERSITY OF INDUSTRY

2022 - Present

- Initially studied Computer Science (2022-2023), switched to Multimedia Technology in second year
- Relevant Coursework: Machine Learning, Data Science, Web Development, Multimedia Systems.

Awards

2nd Place, Scientific Research Competition, Hanoi University of Industry, 2024 - 2025

Recognized for an AI-driven application combining computer vision and backend services.

Project

Mediaverse - Multimedia Content Platform ([Mediaverse - Multimedia Content Platform](#))

- Designed and implemented a large-scale content-sharing platform combining video hosting, article publishing, and document sharing with social interaction features.
- Built **authentication and authorization** (JWT + Passport.js), **user profile & channel management**, and a **content CRUD system** supporting articles, videos, and documents.
- Developed **media processing services** using **FFmpeg** (video transcoding, thumbnail generation, and adaptive streaming) and **Sharp** (image optimization).
- Implemented a **moderation system** (reporting, admin dashboard, and AI-powered content filtering) and a **real-time notification service** (in-app, email, and push with web push).
- Optimized performance with **Redis caching**, **Bull queues for background jobs**, and **PostgreSQL indexing**.
- Documented and tested APIs with **Swagger/OpenAPI, Jest, and Supertest**.
- **Tech stack:** Node.js, Express, PostgreSQL (Prisma ORM), Redis, Bull, JWT, FFmpeg, Swagger.

TravelSense - AI-Powered Travel Planning ([TravelSense - AI-Powered Travel Planning](#))

- Built a backend system that powers an AI-driven travel planning platform capable of generating and optimizing itineraries.
- Designed **authentication and security layer**: JWT-based login, refresh tokens, Google OAuth, Two-Factor Authentication (2FA), input validation, and rate limiting.
- Developed **trip management APIs** (CRUD operations for itineraries, schedules, and activities).
- Integrated **Google Gemini API** for itinerary generation, activity recommendations, and smart chatbot interactions.
- Implemented **vector-based search and hybrid search** using embeddings for content discovery (restaurants, attractions, activities).
- Ensured reliability with **structured logging, error handling, and unit/integration testing**.
- Containerized and deployed using **Docker and Docker Compose**.
- **Tech stack:** Node.js, Express, MongoDB (Mongoose), Google Gemini API, Twilio, Nodemailer, Docker, Swagger, Joi validation.

Bitter - Smart Drug Information Lookup ([Bitter - Smart Drug Information Lookup](#))

- Led development of a research project and mobile app for intelligent drug information retrieval and recognition.
- Built backend services in **Node.js/Express** with **MongoDB**, supporting authentication (JWT), search, and integration with external APIs.
- Integrated **OCR.space API** and **Google Cloud Vision API** for text extraction from pill images, combined with a **custom YOLO + SwinTransformer ML pipeline** for pill recognition (Python microservice).
- Developed **AI-powered Q&A chatbot** using OpenAI and Gemini APIs to answer drug-related queries.
- Frontend developed with **React + Material-UI**, connected to backend via REST APIs.
- Delivered an end-to-end system combining **computer vision, NLP, and backend web services**, achieving **85% accuracy** in drug recognition tasks.
- **Tech stack:** Node.js, Express, MongoDB, JWT, OpenAI API, Google Vision API, React, Python (YOLO, SwinTransformer).

Skills

Programming Languages: JavaScript

Backend Development: Node.js, Express.js, REST API design, Authentication (JWT, OAuth, 2FA), Docker, Prisma ORM, Mongoose

Databases & Systems: PostgreSQL, MongoDB, Redis, Bull (job queues), FFmpeg, Sharp

Other Skills: Data preprocessing, web scraping, API integration, Git, React, Swagger/OpenAPI, Jest, Supertest

Additional Information

Languages: Vietnamese (native), English (reading technical docs well)

Interests: Exploring machine learning algorithms, contributing to AI open-source projects