

# Dang Hoang Nguyen

## Software Engineer

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### 🎓 Education

#### Danang University of Science and Technology

Da Nang, Vietnam

#### Study Data Science & Artificial Intelligence

09/2021 – 09/2025

- Thesis Defense Score: **9.3 / 10**

#### Career Objective

I aspire to become a well-rounded Software Engineer capable of independently building complete projects from start to finish — covering backend services, frontend/web applications, mobile apps, and AI-powered systems.

My goal is to continuously improve my technical expertise, gain hands-on experience with modern tools and frameworks, and contribute to impactful projects that solve real-world problems.

### 🔧 Skills

**Programming Languages:** Python · JavaScript · TypeScript · Go · Dart

**Frameworks & Technologies:** ReactJS · NextJS · React Native · NestJS · Flutter · FastAPI

**Databases & Infrastructure:** PostgreSQL · Supabase · Firebase · AWS · Docker

**AI & Agent Systems:** LangChain · LangGraph · Qdrant

**Tools:** GitHub · GitLab

**AI coding tool:** Cursor, Claude code

**Other:** gemini api, openAI api, codegen openapi, shadcnUI

### 👛 Experience

#### Spartan

##### Software Engineer

11/2025 – now

- Designed and provisioned scalable cloud infrastructure on AWS using Terraform, implemented CI/CD pipelines with GitHub Actions, and established end-to-end observability with Datadog monitoring and alerting slack and built real-time communication systems using WebSocket and Server-Sent Events (SSE) for AI task streaming and progress updates.
- Developed a distributed AI Agent platform for generating images and PPTX slides from natural language ideas
- Designed AWS SQS-based queue systems with multiple workers for scalable AI task processing
- Implemented real-time AI image editing using mask regions and object segmentation
- Built Redis Cluster for caching, job state tracking, and performance optimization
- Worked across Fullstack, Backend, Infrastructure, and AI pipelines in a production-grade system

##### Tech Stack:

ReactJS · NextJS · Zustand · Redux Toolkit · React Query · TypeScript · Kotlin · PostgreSQL · Docker · AWS · Railway · Redis · Python · Terraform · ShadcnUI

#### SOC.ONE Company

##### Software Developer

10/2024 – 10/2025

- Developed two synchronized applications (**Web App + VSCode Extension**) connected to backend services via **WebSocket**
- Implemented **drag-and-drop automotive components** (speedometer, tachometer, line chart) with real-time data visualization and car camera video streaming
- Built **JSON-based component storage**, REST APIs for fetching saved components, and a visual editor for persistent prop customization
- Developed an **Enterprise Chatbot UI Agent** that enables natural language querying and Q&A over company datasets, allowing business users to interact with structured and unstructured data through an AI-powered conversational interface. Built with **Next.js and shadcn/ui** for the frontend, **FastAPI** for AI orchestration and API services, **PostgreSQL** for data storage, **Redis** for caching and session management, and **Docker** for containerized deployment, delivering a scalable and production-ready data intelligence platform.

#### Tech Stack:

React.js, Zustand, Axios, TailwindCSS, Shadcn, VSCode API, Next.js, React Query

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## Projects

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### Graduation Project – Multi-Agent System for Tax and Insurance Legal in Vietnam

#### Software Engineer

03/2025 – 06/2025

#### Key Features

- Conversation history management
- Streaming chat between user and AI agents
- Real-time agent mode visualization (researching, crawling, synthesizing)
- Synthesized results with data source rendering
- Incremental UI rendering via chunk parsing for smooth UX
- Backend streaming proxied through Next.js API routes

#### AI System

- Multi-agent architecture using **LangGraph**
- Vector search with **Qdrant**
- Agents: Researcher, File Analysis, Calculation, File Processing
- Crawled data from:
  - **Vietnam Law Library (Thư Viện Pháp Luật)**
  - **Vietnam Social Security (Bảo Hiểm Xã Hội Việt Nam)**
  - **General Department of Taxation of Vietnam (Tổng Cục Thuế Việt Nam)**

**Tech Stack** NestJS, NextJS, FastAPI, Docker, S3, PostgreSQL, Qdrant

#### Repositories

- Frontend: [https://github.com/Yoriichi-Dang/vietlegal\\_web](https://github.com/Yoriichi-Dang/vietlegal_web)
- API: [https://github.com/Yoriichi-Dang/vietlegal\\_server\\_api](https://github.com/Yoriichi-Dang/vietlegal_server_api)
- Agent: [https://github.com/Yoriichi-Dang/vietlegal\\_agent](https://github.com/Yoriichi-Dang/vietlegal_agent)

## Languages

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- English