DOAN TRONG HIEU

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EDUCATION

Bachelor of Automation and Control Engineering, Ton Duc Thang University   2018 - 2022

EXPERIENCE

Software Engineer   04/2025 - Present
IPVM   *Pennsylvania, United States*

- Engineered an intelligent content editor with an embedded LLM-powered AI interface, enabling real-time writing assistance and automated content evaluation to streamline editorial workflows and reduce manual effort.
- Enhanced AI-powered browser extension with automatic YouTube video detection, transcript extraction, and intelligent chat interface that enables real-time video content analysis and querying ▶.
- Engineered AI-powered content translation system supporting 50+ languages with automatic translation based on user preferences and proactive pre-translation of new posts into 20 popular languages, enabling seamless multilingual content access for global enterprise users ▶.

Full-Stack AI Engineer   06/2024 - 04/2025
FPT Software AI Center   *Ho Chi Minh City, Vietnam*

- Developed AI-powered applications leveraging large language models, intelligent agents, and computer vision technologies for various industries (automotive, healthcare, energy).

Full-Stack AI Engineer   05/2023 - 06/2024
VTC Education   *Ho Chi Minh City, Vietnam*

- Engineered an LLM-based chatbot system delivering company information, implementing AI agent architecture to streamline customer interactions and reduce support volume.
- Developed an image generation application leveraging Stable Diffusion models.
- Developed a synthetic media application that transforms static photographs into realistic talking videos with synchronized speech, enabling cost-effective content creation for marketing materials.
- Created APIs enabling AI models to extract and process structured data from presentation files (PPT, PDF), improving document intelligence capabilities for enterprise knowledge management.

AI Engineer   07/2022 - 05/2023
VinBigData   *Ho Chi Minh City, Vietnam*

- Engineered a voice biometrics solution that identifies age, gender, and regional accent, implementing end-to-end ML pipeline from data processing to model deployment with an intuitive user interface.

AI Engineer Intern   04/2022 - 06/2022
FuviTech   *Ho Chi Minh City, Vietnam*

- Oversaw inventory management and quality control for electronic components while delivering technical support to clients.
- Implemented a computer vision AI model that autonomously detects manufacturing defects in electronic components, reducing manual inspection time.

SKILLS

Programming Languages	Python, JavaScript, TypeScript, Ruby
Back End Development	FastAPI, NestJS, Ruby on Rails
User Interface Development	React.js, Next.js, shadcn/ui
Databases	PostgreSQL, MongoDB, Redis, Qdrant
DevOps	Docker, Kubernetes, AWS
Machine Learning	LangChain, LangGraph, LlamaIndex, PyTorch
Project Management	Jira, Confluence

PROJECTS

AI-Powered Browser Extension
02/2025 - 07/2025

- Description: Developed a chat system that integrates web browsing context with AI interactions, enabling users to analyze YouTube videos, web pages, and PDF documents simultaneously through natural conversation. Features a command system for specialized tasks like content summarization, information extraction, and personalized learning, delivering a solution that bridges browser functionality with advanced AI capabilities ▶.
- Tech Stack: FastAPI, Nest.js, React.js, Plasmo, shadcn/ui, LangChain, LangGraph, Prisma, Supabase, Docker, OpenAI

Automotive AI Assistant
09/2024 - 03/2025

- Description: Engineered a multi-agent LLM-powered conversational vehicle interface with end-to-end voice processing pipeline (wake word detection, speech recognition, text-to-speech synthesis) and intent classification, enabling comprehensive vehicle control, navigation, personalized assistance, and multimedia management through natural language commands ▶.
- Tech Stack: FastAPI, Vue.js, Nuxt.js, LangChain, LangGraph, Qdrant, MongoDB, Redis, Docker, Ollama

Gym Exercise Helper
09/2022 - 10/2022

- Description: Developed a real-time gym exercise monitoring system using BlazeFace pose detection and LSTM neural networks, improving workout performance by counting exercise repetitions and providing feedback to users ▶.
- Tech Stack: OpenCV, TensorFlow

Face Verification for Security Applications
08/2022 - 09/2022

- Description: Developed a face verification solution using Siamese Network and OpenCV, leveraging deep learning techniques to compare and verify facial images ▶.
- Tech Stack: OpenCV, TensorFlow

RoboVision: AI Mobile Robot
08/2021 - 03/2022

- Description: Engineered self-driving robot system integrating SolidWorks-designed hardware, CNN-based computer vision algorithms for traffic sign detection and lane maintenance to improve road safety, and NVIDIA Jetson Nano for real-time edge AI processing.
- Tech Stack: OpenCV, TensorFlow

CERTIFICATES

- **TOEIC 835**, *IIG Viet Nam*   04/2022 - 04/2024
- **Mechanical Design**, *Dassault Systemes*

REFERENCES

- **Duc Tran**, *Dev Team Lead*, IPVM | ✉ duc@ipvm.com