



Nguyen Viet Hoang

SUMMARY

AI Engineer with 1+ year of experience specializing in Smart Manufacturing and Agentic Workflows. Proven track record in designing Computer Vision systems (YOLO) with >95% accuracy and optimizing inference pipelines to reduce latency from 45s to <15s for real-world production. Winner of AI Hackathons and 4th place in the 2025 Olympic AI HCMC; expert in building Agentic RAG using LangGraph and deploying robust models via Docker and REST APIs

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EXPERIENCE

AI Engineer - Mebisoft (9/2025 - Current)

- *Hybrid AI Architecture:* Designed and deployed high-performance Object Detection models (YOLO/RTMDet) for automated tracking and counting. Integrated intelligent contextual reasoning to achieve over 95% automation accuracy.
- *Intelligent Data Assistant (Text-to-SQL):* Engineered a multi-tasking Chatbot system capable of navigating 62 complex schema tables. Leveraged Metadata Enrichment and RAG (Retrieval-Augmented Generation) to convert natural language into precise SQL queries for real-time farm management.
- *System Optimization:* Optimized inference pipelines, successfully reducing latency from 45s to <15s. Enhanced FPS for Computer Vision systems and implemented a SQL Guardrail layer to ensure data security and robust multi-tenancy support.

Model Evaluation & RAG Specialist - TURING (05/2025 - 08/2025)

- *RAG Benchmarking:* Designed and executed evaluation pipelines to measure Retrieval Quality (Hit Rate, MRR) and Grounding Accuracy, identifying failure modes like hallucinations and retrieval noise.
- *Data Strategy:* Curated high-quality instruction-tuning datasets to improve Tool Calling/Function Calling reliability for internal LLM agents.

AI Engineer (Intern) - ThinkWare (01/2025 - 04/2025)

- *Executed high-precision Data Annotation tasks, including Object Detection and classification of thousands of objects within complex road scenes for an autonomous driving project.*
- *Maintained data labeling quality standards with a careful and meticulous approach, ensuring the consistency and reliability of the output data.*

Python Instructor (10/2023 - 5/2024)

- *Taught basic and advanced Python concepts to high school students.*
 - *Developed excellent communication skills by breaking down complex technical topics into clear, understandable lessons.*
 - *Reviewed and debugged student code carefully and meticulously, providing constructive feedback to ensure accuracy.*
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PROJECTS

VietStoryLens: AI-Powered Historical Landmark Recognition

Role: Personal Project (LotusHackathon MVP)

- *Agentic RAG Architecture: Built a sophisticated RAG pipeline using LangGraph with a Router-Verifier pattern to identify landmarks and generate historically grounded narratives.*
- *Hybrid Retrieval & Reranking: Engineered a retrieval layer combining CLIP embeddings (FAISS) and GPS-based Haversine re-ranking to ensure precise context injection, reducing identification errors by 30%.*
- *MCP-based Tooling: Implemented a custom MCP-server (Model Context Protocol) to expose Google Places API and internal Historical Knowledge Bases as tools for the LLM agent.*
- *Grounding & Citations: Integrated strict Guardrails and citation logic to ensure every generated "story" was grounded in landmarks.json, eliminating hallucination in historical dates/facts.*
- *Tech Stack: Python, FastAPI, LangGraph, FAISS, OpenAI, Flutter, MCP.*

AI-Powered Fungi Detection System

Leader-Olympic AI HCMC Competition

- Designed a hybrid ConvNeXt + Transformer model, achieving 97.7% accuracy in fungal species classification.
- Automated the end-to-end pipeline: data ingestion, cleaning, augmentation, and preprocessing.
- Led a 4-member team, coordinated research direction, and prepared presentation materials.

HONORS & AWARDS

4th | Olympic AI HCMC Competition 2025

Consolation Prize | School IQ Math Competition

Outstanding Graduate of the Class of 2023

Champion of PieoneDream Hackathon AI x Blockchain

EDUCATION

Bachelor of Machine Learning | 2022-2026

HCMC University of Technology

CERTIFICATES

- **Google** AI essentials
- **Google** Data Analytics
- **Stanford** University Machine Learning Specialization
- **Stanford** AI in Healthcare
- **IBM** AI Engineering Professional Certificate

ACTIVITIES

- Facilitator Of DevFest - Google Developer Group
 - Facilitator của QuanQuanGCP25 - Google Developer Group
 - Research Assistant | AI Scientific Research Laboratory
 - Vietnam National Student Olympiad 2025 Participant
 - Youth Digital Citizens Challenge **Top 40/200**
 - HumanLog Competition by Kühne Logistics University **Top 60 /1000**
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