

NGUYEN QUANG DUNG

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Hanoi, Vietnam

SUMMARY

Research Engineer focused on LLM/SLM alignment, agentic AI systems, and physics-informed machine learning. Build and deploy production NLP/agent pipelines, and translate research into applied systems with measurable modeling gains in domain-specific settings.

EDUCATION

Hanoi University of Science and Technology
B.Sc., Computer Science

2023 – Present
Hanoi, Vietnam

WORK EXPERIENCE

Koidra AI
AI Engineer

Nov. 2025 – Present
Remote

- Engineered robust greenhouse control systems by integrating PID controllers with gradient-based anomaly detection, improving operational stability and reducing manual interventions.
- Refactored the core control module leveraging State Machine design patterns, enhancing system reliability and reducing code maintenance costs.
- Developed a physics-informed ML model for transpiration dynamics, improving predictive accuracy by 90% over baseline while preserving physical consistency.

A-Star Group

AI Engineer (Promoted from Intern)

Feb. 2025 – Nov. 2025
Hanoi, Vietnam

- **Startup Incubation & R&D:** Spearheaded the technical R&D for Web3 AI initiatives, translating abstract business requirements into functional MVPs and scalable architectures for flagship portfolio products.
- Architected a Web3 Multi-Agent Platform using Model Context Protocol, successfully automating yield optimization strategies and serving as the core engine for a flagship portfolio product.
- Developed a crypto-wallet classification microservice with FastAPI, managing the full ML lifecycle from data curation to production inference.
- Implemented domain-specific RAG and NER pipelines tailored for blockchain data, reducing LLM hallucination rates and significantly improving autonomous agent reliability.

Natural Language Processing Lab — BKAI

Undergraduate Research Assistant

May 2024 – Nov. 2025
Hanoi, Vietnam

- Optimized pre-training and fine-tuning pipelines for Small Language Models, significantly enhancing Information Retrieval capabilities for low-resource domains.
- Standardized NLP workflows for NER and Text Classification, achieving substantial improvements in data processing efficiency and evaluation consistency.

RESEARCH & PUBLICATIONS

ViLexCPO: A Multi-Task and Preference-Aligned Framework for Legal QA

Quang Dung Nguyen, Duc Dung Nguyen, Huu Tri Dung Vo, Le Thanh Huong

SOICT 2025

Accepted

- **First Author.** Engineered a novel Contrastive Preference Optimization framework to align language models for the Vietnamese legal domain, effectively mitigating low-resource constraints.

HONORS & AWARDS

- **Silver Medal:** National Physics Olympiad (VPhO)
- **Top 6 Globally:** Trustworthy NeuroSymbolic & XAI Workshop @ **IJCNN 2025**
- **Top 5 Finalist:** DataFlow 2025 (National Data Analysis Hackathon)

TECHNICAL SKILLS

- **Languages:** Python, SQL, Bash/Shell.
- **AI/ML Domains:** LLM/SLM Fine-tuning, RAG, Multi-Agent Systems, Physics-Informed Neural Networks, NLP, Knowledge Graphs.
- **Frameworks & Libraries:** PyTorch, Hugging Face, LangChain/LangGraph, OpenAI API, Model Context Protocol.
- **MLOps & Engineering:** Docker, Git, CI/CD, FastAPI, RESTful APIs, VectorDB, MongoDB.