

# Dat Vo Dinh

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## EDUCATION

**Hanoi University of Science and Technology**  
*BSc in Data Science and Artificial Intelligence (DS-AI)*

*Hanoi, Vietnam*  
*Aug 2021 – Aug 2025 (Expected)*

## TECHNICAL SKILLS

**Programming Languages:** Python, SQL, Java, C++.

**Deep Learning:** Pytorch, Lightning, OpenCV, Transformers, Unsloth, Ollama, LlamaIndex.

**Deployment and MLOps:** Docker, Gradio, WandB, MLFlow.

## WORK EXPERIENCE

**Part Time AI Researcher**  
*VIS Startup*

*May 2022 – Jul 2023*  
*Hanoi, Vietnam*

- **Technologies:** Pytorch, Numpy, Numba, Gynasium, Selenium.
- Researched and implemented 2 deep reinforcement learning algorithms, successfully surpass 95% of the environments in the system by competing with other decision-making agents.
- Developed three gym-based multiplayer environments for researching algorithms, with optimization achieved using Numpy and Numba JIT, reaching the speed upto 1000 games per second.
- Research about Japanese stock market, crawl data from 3 different sources: Minkabu, MarketWatch and YahooJP and cross-check to ensure the credibility of sources.

## PROJECTS

**Open source contributions** | *Github*

*2024*

- Ollama (60k stars): Add my Chatbot project to community integrations in the project's documents.
- LlamaIndex (30k stars): Fix a bug in fusion retriever module.

**LLM finetuning** | *Transformers, Unsloth, PEFT, Trl*

*Apr 2024*

- Finetune open sources LLM model such as Llama-3, Mistral to perform multiple task such as:
- Function calling: enable LLM to use external functions and tools provided to solve complex problems.
- Instruction tuned: helps the LLM follow instructions better to more reliably perform complex tasks and instructions.
- Structured output: LLM return structured output such as JSON, XML...based on user's input.

**RAG chatbot** | *Ollama, LlamaIndex, ChromaDB, Gradio, Docker, FastAPI, Ngrok*

*Mar 2024*

- Build a fully local Chatbot with advanced RAG pipeline to give precise answers base on multiple given documents.
- Pull and use any open sources model from Huggingface and Ollama with different quantization.
- Design a simple web interface so users can customize LLM models and input documents to use the chatbot.
- Containerize all the chatbot system and service using Docker for deployment and management.

**Stable Diffusion from scratch** | *Pytorch, Lightning, WandB, Gradio*

*Feb 2024*

- Implemented Latent Diffusion Model (Stable Diffusion) from scratch for education purpose.
- Implemented full training and tracking experiment pipeline, different sampling algorithms such as DDIM, PLMS...
- Build a simple UI with Gradio to visualize the inference process of the model with different sampling methods.