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EDUCATIONS

Ha Noi University of Science and Technology

BSc in Data Science and Artificial Intelligence (DS-AI)

Ha Noi, Viet Nam

Aug 2021 – Aug 2025 (Expected)

TECHNICAL SKILLS

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

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

Deployment and MLOps: Docker, Gradio, WandB, AzureML, AWS.

Backend: MongoDB, Chroma, Pydantic, FastAPI.

Tools: Git/Github, Github Actions, Shell, Postman, Figma, Jira.

EXPERIENCES

Freelance

Taiwan

Quantitative Researcher

Oct 2023 – Jan 2024

- **Technologies:** Pytorch, Lightning, WandB, Transformers, Polars, Amazon S3
- Design and improve the reward function for a reinforcement learning-based trading environment to mimic real-world trading scenarios.
- Developing an RL agent combine with current SOTA algorithms such as Transformers, surpass the performance of traditional ensemble models such as XGBoost, Gradient Boosting,... through backtest evaluation.

VIS (Startup)

Ha Noi, Viet Nam

Part Time AI Researcher

May 2022 – Jul 2023

- **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-Sources Contributions | Github

2024

- Ollama (60k stars): Add my Chatbot project to community integrations.
- 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.
 - Instruction tuned: generate detail answers based on the given instruction.
 - Structured output: LLM return structured output such as JSON, XML...

RAG Chatbot | Ollama, LlamaIndex, ChromaDB, Gradio, Docker, FastAPI, Ngrok

Mar 2024

- Build a fully local Chatbot with advanced RAG pipeline that can retrieve information from multiple documents based on user queries and providing precise answers.
- Design a simple web interface so users can customize LLM models and input documents.
- Create an HTTPS endpoint using Ngrok for sharing demo.
- Implement Docker for streamlined deployment and management of the Chatbot system.

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

Feb 2024

- Implemented Latent Diffusion Model (Stable Diffusion) from scratch for education purpose, include full training and tracking experiment pipeline using Pytorch Lightning and Wandb.
- Build a simple website to visualize the inference of the diffusion model.