

Nguyen Le Song Huong - Backend Developer



EDUCATION

Ton Duc Thang University
Computer Science - Artificial Intelligence
GPA: 3.07/4.00

Ho Chi Minh, Viet Nam
August 2019 - April 2024

WORK & EXPERIENCE

TMA SOLUTIONS
Industry Internship Batch 41, DC22

Ho Chi Minh, Viet Nam
July 2023 - October 2023

Machine Learning Developer - Full time

- Research and train model to classify image (cat & dog)
- Microservice architecture using Tornado framework
- Make and test multiple API in parallel, sequential

Technologies: CNN model, Tensorflow library, microservices, Tornado, RESTful API, ONNX, Java

BAP IT JSC
Intern AI Developer - Full time

Ho Chi Minh, Viet Nam
June 2024 - August 2024

- Research and train Agent for chatbot, build with Python
- Use Django web framework for backend, Langchain, Langgraph
- Use PostgreSQL database, embedding

Technologies: Git, Python, Django, ReactJS, Langchain, Agents, Tools, Docker, Git

PROJECTS

Building an Optimized Chatbot System with Langchain

June 2024 - August 2024

Team size: 5 members

Descriptions: Developed a chatbot system using **LangChain**, **LLM**, and **agents** to provide responsive, context-aware interactions. Integrated **various tools** for data querying to enhance response accuracy, ensuring the chatbot delivers precise and relevant answers. The backend is powered by **Django**, providing scalability and robustness to the overall system.

Responsibilities

- **Chatbot Architecture:** Used **LangChain** to build agents and **LLM** for understanding and generating natural language responses.
- **Data Querying:** Implemented agents with querying capabilities, using embeddings to convert imported data for better matching and retrieval from **PostgreSQL**.
- **Backend Development:** Built with **Django** for robust API management and scalability, utilizing JWT for authentication.
- **PDF Processing:** Utilized **Vision LLM** to extract text and images from scanned PDFs, automatically loading processed content into the database upon import.

Technologies used: LangChain, LLM, Python, Django, JWT, Vision LLM, Transformers, NLP, Machine Learning, RESTful API, Docker, PostgreSQL

Objective:

- Develop a chatbot system featuring an Agent Supervisor that automatically selects the most suitable agent based on user requests.
- Enable users to create and customize their own agents, allowing for personalized and flexible interactions.

Team size: 2 members

Descriptions: Developed a document sharing website where students can easily share, download, and upload documents through a user-friendly and fast interface. Utilized **.NET** for cross-platform development, including **ReactNative** for mobile applications and **ReactJS** for web applications. Integrated **Elasticsearch** for efficient keyword search within documents.

Responsibilities

- Designed and managed the document database, enabling efficient querying of data from SQL Server.
- Developed and maintained communication between services using RESTful APIs.
- Created use cases and designed workflows to ensure a seamless user experience.

Technologies used: RESTful API, Java, .NET, ReactJS, ReactNative, HTML/CSS, SQL Server

Objective:

- Develop a seamless document sharing platform tailored for students, ensuring quick access and ease of use.
- Achieve cross-platform functionality by employing .NET alongside ReactNative for mobile applications and ReactJS for web interfaces.
- Enhance document search capabilities with Elasticsearch to enable fast and accurate keyword-based searches.

Image Classification Model with Microservice Architecture

July 2023 - October 2023

Descriptions: trained a CNN model to classify images of cats and dogs using the **TensorFlow** library. Implemented the system using a **microservice** architecture with the **Tornado** framework, allowing for scalable and modular deployment. Developed and tested multiple APIs to handle image classification requests, supporting both parallel and sequential execution modes for efficient processing.

Responsibilities:

- Designed and trained a **CNN model using TensorFlow** to accurately classify images of cats and dogs.
- Developed microservices using the **Tornado** framework to manage different components of the system.
- Built and tested **RESTful APIs** to interact with the classification model, enabling parallel and sequential processing of requests.
- Converted and optimized the model using **ONNX** for improved performance across different platforms.
- Integrated APIs with Java-based services for end-to-end application deployment and testing.

Technologies used: CNN model, TensorFlow, Microservices, Tornado, RESTful API, ONNX, Java

Objective:

- Enable efficient and accurate classification of cat and dog images using a trained CNN model.
- Provide a scalable and modular system through microservice architecture
- By running APIs in parallel, improving the system's ability to handle high loads.
- Improve model deployment flexibility and cross-platform compatibility using ONNX, the solution adaptable for various environments.

SKILLS**LANGUAGES**

Language: Python

Backend Technical Skills:

- Django
- API Integration
- Docker (Containerization)

SQL Technical Skills:

- SQL Server
- PostgreSQL

Others: GitHub, Postman, Swagger, API Testing and Debugging

English:

- TOEIC:725
- PET B1 Cambridge: 152

Vietnamese (Native)