



# Nguyen Le Song Huong - Backend Developer

+84 906932076 shuongnguyen.work@gmail.com

## 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  
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

Ho Chi Minh, Viet Nam  
July 2023 - October 2023

BAP IT JSC  
Intern AI Developer - Full time

- 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

Ho Chi Minh, Viet Nam  
June 2024 - August 2024

## 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.

## Final Project - Share Documents Website

April 2023 - August 2023

### 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

### English:

Backend Technical Skills:

- TOEIC: 725

- API Integration
- Docker (Containerization)

- PET B1 Cambridge: 152

SQL Technical Skills:

### Vietnamse (Native)

- SQL Server
- PostgreSQL

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