

Duy Huynh

MACHINE LEARNING ENGINEER · SOFTWARE BACKEND DEVELOPER

District 3, Ho Chi Minh City

+84 918 451 096 | vndee.huynh@gmail.com | duy-huynh.com | github.com/vndee | linkedin.com/in/vndee

Work Experience

Hung Thinh Corporation

Ho Chi Minh City, Vietnam

Senior Specialist, Applied Artificial Intelligence

Apr 2022 - Jan 2023

- Work as a senior research and development specialist at Hung Thinh Innovation (a member of Hung Thinh Corporation); In charge of building awesome features for the next-generation of smart cities.
- Techstack:** Python with PyTorch, NumPy, Matplotlib, Pandas, Scikit-learn, Ubuntu Linux, Linux tools, Apt, Scripting, Git, Jenkins, Kubernetes, FastAPI, Kafka, Redis,...

TIKI Corporation

Ho Chi Minh City, Vietnam

AI Engineer

Dec 2020 - Apr 2022

- Develop million-scale recommendation algorithms for TIKI using Pattern Mining, Graph Neural Network, Matrix Factorization, and other Representation Learning algorithms. TIKI (tiki.vn) is the leading online retailer in Vietnam, offering a seamless end-to-end retail experience.
- Work closely with Data Engineer and Backend Engineer to produce high quality and production-ready system. We also run A/B tests to evaluate the performance of the algorithm, as well as deliver rapid prototyping of products with immediate user feedback and business needs.
- Techstack:** PyTorch, Kubernetes, Google Cloud BigQuery, Apache Airflow, Pandas, Numpy and other high-performance Python computing libraries.

DPS - Dai Phat Solution

Ho Chi Minh City, Vietnam

AI Engineer

Dec 2018 - Nov 2020

- Develop end-to-end Optical Character Recognition solution for Vietnamese with 0.2 CER. Build backend services for face attendance checking application base on Face Recognition Algorithm with 98% accuracy.
- Implement micro-services architecture with REST-based API to serve real-time AI solutions. Deploy and maintain overall service infrastructure utilizing Docker container, focusing on high-availability, fault tolerance, and auto-scaling.
- Techstack:** PyTorch, Docker, FastAPI, SQL and NoSQL database, Apache Kafka, Redis, Pandas, Numpy and other high-performance Python computing libraries.

AI Lab - Ton Duc Thang University

Ho Chi Minh City, Vietnam

Research Internship

Jun 2017 - Dec 2018

- Deep dive into ML/DL theories, especially in Natural Language Processing.
- Work on document understanding project using modern computer vision technique like Object Recognition and Segmentation.
- Techstack:** PyTorch, Jupyter Notebooks, Flask.

Education

Ton Duc Thang University

Ho Chi Minh City, Vietnam

Bachelor of Science in Computer Science

Aug 2017 - Sep 2022

- GPA 3.29, Dean's Honour List

Huynh Man Dat Highschool for the Gifted

Kien Giang, Vietnam

Excellent student specializing in Informatics

Aug 2014 - Aug 2017

Opensource Projects

Sentivi

<https://github.com/vndee/sentivi>

PyTorch, Scikit-learn, Transformers, FastAPI, Docker

Sep 2020 - Oct 2020

- A simple tool for sentiment analysis which is a wrapper of scikit-learn and PyTorch Transformers models. It is made for easy and faster pipeline to train and evaluate several classification algorithms.

Blockchain Demo

<https://github.com/vndee/blockchain-demo>

Python, FastAPI

Jan 2023 - Feb 2023

- A very simple implementation of blockchain and its applications in Python.

Awesome Vietnamese NLP

<https://github.com/vndee/awesome-vietnamese-nlp>

Github

Jan 2020 - Present

- A collection of Vietnamese Natural Language Processing resources.

GraphCRDT

<https://github.com/vndee/graph-crdt>

Python, Docker, FastAPI, WebSockets

Dec 2021 - Dec 2021

- A portable on-memory conflict-free replicated graph database. This is a simple implementation of a conflict-free replicated graph database. The graph operations have been developed based on the Last-Writer-Wins element set. This project comes with a full decentralization fashion which can merge data without any coordination between replicas.

Vissee

<https://github.com/vndee/vissee>

PyTorch, FastAPI, Kafka, Docker, Milvus, Elasticsearch

Dec 2019 - Feb 2020

- End-to-end visual search service that empowers by state-of-the-art Deep Learning algorithm. It is designed for scale and stability.

Skills

Computing	Python high-efficiency computing libraries and related: Pandas, PyTorch, NumPy, Scikit-learn. etc.
Backend	FastAPI, Docker, Java, C/C++, Jenkins, Airflow, Kafka, Redis, SQL and NoSQL database, Google Cloud Platform, BigQuery, Kubernetes.
Miscellaneous	Linux, Shell (Bash/Zsh), \LaTeX (Overleaf/R Markdown), Git, CI/CD, Quantitative Analysis.
Soft Skills	Time Management, Teamwork, Problem-solving, Documentation, Engaging Presentation, Technical Writing and Discussion.

Achievements

2017	Finalist/Honor Prize , National Informatics Competition for Youth	Binh Dinh
2016	Silver Medalist , 30/4 Olympiad for Gifted High School Student (South and Central Vietnam)	Ho Chi Minh City
2016	Bronze Medalist , Costal and Northern Olympiad for Gifted High School Student	Thai Nguyen
2016-2017	Province's Representative , First-round of National Team Selection Competition in Informatics	Kien Giang

Competitive Programming

Codeforces Candidates Master , Rating 2065 (top 4%): https://codeforces.com/profile/hdi	2015-2017
Hackrrank Algorithm Specialist , Rating 2268.76 (top 1%): https://hackerrank.com/watagogo	2016-2018

Publications

NICS'22	An Pha Le, Tran Vu Pham, Thanh-Van Le, Duy V. Huynh , Dat Ngo. <i>Robust Hierarchical Model For Joint Span Detection And Aspect-based Sentiment Analysis in Vietnamese</i> . In Proceeding of NAFOSTED Conference on Information and Computer Science (NICS), 2022.
ICMLANT'21	An Pha Le, Tran Vu Pham, Thanh-Van Le and Duy V. Huynh . <i>Neural Transfer Learning For Vietnamese Sentiment Analysis Using Pre-trained Contextual Language Models</i> . In Proceeding of IEEE International Conference on Machine Learning and Applied Network Technologies (ICMLANT), 2021
KSE'20	Hien T. Nguyen, Duy V. Huynh , Hieu D. Ngoc and Nam Thoai. <i>Visualizing Vietnam's Scientific Research Projects Based on Pre-trained Language Models and UMAP</i> . In Proceeding of Knowledge and Systems Engineering Conference, 2020.

Blog

Personal Blog

<https://blog.duy-huynh.com>

This is a personal pop-sci and technology blog for vietnamese audiences.

Selected articles:

Jan 2021 - Present

- "Blockchain Demystifying: Programming Blockchain with Python", 2023
- "Technology behind ChatGPT", 2023.
- "The "classic" of Convolutional Neural Network", 2022.
- "Bloom Filter: A probabilistic data-structure", 2022.
- "Monolith: The secrets behind Tiktok", 2022.
- "An Overview of Modern Speech Synthesis Approaches", 2022.
- "Recommendation In Action", 2022.

References available upon request.