







NGUYEN DUC THANG

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WORK EXPERIENCE

Apero

AI Engineer

Apr 2023 - Now

- Conducted extensive research in the field of AI, with a focus on Generative AI techniques.
- Developed and implemented state-of-the-art algorithms for Stable Diffusion models.
- Played a pivotal role in researching and developing core AI components for integration into web and app-based products.
- Collaborated closely with a multidisciplinary team of developers and product managers to deliver cutting-edge AI solutions.

FPT Software

AI Resident

May 2021 - Apr 2023

- Joined the first cohort of the FPT Software AI Residency program as an AI Resident.
- Conducted research and proposed innovative problems and ideas for submission to international conferences.
- Actively kept abreast of the latest advancements in the field of AI, attending conferences and engaging in continuous learning to enhance skills and knowledge.
- Provided mentorship in the 2022 Junior Summer Internship Program.

EDUCATION

Hanoi University of Science and Technology (HUST)

Engineer

- **Major:** *Talented Engineer of Applied Mathematics and Informatics* 2016 - 2021
- **Graduation level:** **Very Good** (Top 4/26 in class)
- **Coursework:** Data Structures and Algorithms, Discrete Math, Probability and Statistics, Optimization, Linear Algebra, Calculus, Object Oriented Programming, Database, and more.

PROJECTS

Advertify AI

- *Description:* Developed an innovative automated system for generating advertising images: by simply inputting a product URL, Advertify swiftly creates professional images for advertising campaigns in seconds.
- *Achievement:* Successfully developed a high-precision content generation mechanism, ensuring sharp, product-accurate images. Notably, Advertify excelled at accurately creating images with embedded text.
- *Techniques used:* Stable Diffusion, Text Generation, IP Adapter.

AI Art Generator

- *Description:* Developed an advanced AI Art Generator ecosystem, featuring capabilities such as Style Transfer, Enhancement, Face swapping, AI Inpainting, AI Outpainting, AI Avatar and more.
- *Achievement:* Achieved top trending status as an art generator on the Android app store. The product has generated substantial revenue for the company.
- *Techniques used:* Stable Diffusion, Controlnet, Dreambooth, Textual Inversion, Upscale and Enhance, LCM, TensorRT, and more.

AI E-Commerce

- *Description:* Developed an AI solution for e-commerce systems that automatically adjusts backgrounds dynamically, tailored to each product. This enhances the visual appeal and consistency of the product catalog.
- *Achievement:* Utilized in products that help customers quickly and beautifully create images for their online products.
- *Techniques used:* SDXL Lightning, Controlnet, Background Removal, Textual Inversion, Image Processing.

IFClass: Class based Influence Functions for Error Detection

- *Description*: Conducted research and proposed innovative solutions for detecting mislabeled data in classification and sequence-to-sequence problems.
- *Achievement*: Published 2 papers rank A*.
- *Techniques used*: Influence Function, BERT, CodeBERT, Hydra Config.

PUBLICATIONS

1. **Thang Nguyen-Duc**, Hoang Thanh-Tung, Quan Hung Tran, Dang Huu-Tien, Hieu Ngoc Nguyen, Anh T. V. Dau, Nghi D. Q. Bui (2023). *Class based Influence Functions for Error Detection*. The 61st Annual Meeting of the Association for Computational Linguistics (ACL - Rank A*).
2. Anh T. V. Dau, **Thang Nguyen-Duc**, Hoang Thanh-Tung, Nghi D. Q. Bui (2022). *Towards Using Data-Influence Methods to Detect Noisy Samples in Source Code Corpora*. 37th IEEE/ACM International Conference on Automated Software Engineering (ASE - Rank A*).
3. **Thang Nguyen-Duc**, Quan Tran, Hoang Thanh-Tung (2022). *Large Scale Error Detection with Small Data*. Preprint.
4. Huu-Tien Dang, **Nguyen Duc-Thang**, Hoang Thanh-Tung, Naoya Inoue (2024). *Detecting and Rectifying Noisy Labels: Similarity based Methods*. Preprint.

SKILLS

Framework	Pytorch, Pytorch Lightning, Tensorflow
Languages	<i>Proficient</i> : C/C++, Python - <i>Basic</i> : Javascript, Matlab, C#
Libraries	Accelerate, Flask, FastAPI, Sklearn, Numpy, Pandas, Matplotlib, Seaborn, Httpx Keras , Pytest, Streamlit, Gradio, Selenium, Scrapy
MLOps	MLFlow, Wandb, DVC, Ray, Airflow, Feast
Maths	Linear Algebra, Probability & Statistics, Discrete Math, Calculus, Optimization
Other	HTML/CSS, WordPress, Latex, Git

ACHIEVEMENTS

Certificate: Machine Learning DevOps Engineer, <i>Udacity</i>	2023
Champion of the AI Center Hackathon Competition, <i>FPT Software</i>	2023
Teaching Assistant, <i>HUST</i>	2020
Scholarship for excellent students (Top 5%), <i>HUST</i>	2020
Scholarship for excellent students (Top 5%), <i>HUST</i>	2019
Scholarship for study promotion, <i>HUST</i>	2019
Top 2 at HUST Alphathon Competition, <i>WorldQuant</i>	2019

INVITED TALKS

- Diffusion model: Use cases and Fine-tuning techniques, *Google I/O Extended* 07/2023
- Diffusion model: Foundations and Applications in Natural Language Processing, *FPT Software* 04/2023