Minh-Nam Tran

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LinkedIn | GitHub | Portfolio | Google Scholar

Education

The University of Science, VNU-HCM — Ho Chi Minh, Vietnam
B.Sc. in Computer Science; ***GPA: 3.95/4.00*** — *Sep 2020 – Oct 2024*

Thesis: "*Exploring and Improving Language Understanding Abilities of Vietnamese Language Models*" supervised by Professor Dien Dinh and Dr. Long HB Nguyen.

High School for The Gifted, VNUHCM — Ho Chi Minh, Vietnam
High School Diploma; ***GPA: 9.10/10.00*** — *Sep 2017 – Jun 2020*

Publications

1 **M.-N. Tran**, P.-V. Nguyen, L. Nguyen, and D. Dinh, "ViMedAQA: A Vietnamese medical abstractive question-answering dataset and findings of large language model," in *ACL 2024 Student Research Workshop*, Aug. 2024. URL: https://openreview.net/forum?id=gztPZxN5ed.

2 **M.-N. Tran**, P.-V. Nguyen, L. Nguyen, and D. Dinh, "ViGLUE: A Vietnamese general language understanding benchmark and analysis of Vietnamese language models," in *Findings of the Association for Computational Linguistics: NAACL 2024*, K. Duh, H. Gomez, and S. Bethard, Eds., Mexico City, Mexico: Association for Computational Linguistics, Jun. 2024, pp. 4174–4189. DOI: 10.18653/v1/2024.findings-naacl.261.

3 T.-A. To, **M.-N. Tran**, T.-B. Ho, *et al.*, "Multi-perspective traffic video description model with fine-grained refinement approach," in *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) Workshops*, Jun. 2024, pp. 7075–7084.

Experience

Users and Information Lab, KAIST — Daejeon, South Korea
Visiting Research Student — *Jun 2023 – Aug 2023*

- Engaged in a 2-month KAIST School of Computing Summer Internship program under the supervision of Professor Alice Oh and Ph.D candidate Rifki A. Putri.
- Investigated in adapting the multilingual generative pre-trained language models to Vietnamese downstream tasks via multitask instruction learning.

Viettel Digital Talent 2023, Viettel Headquarters — Hanoi, Vietnam
AI Engineer Internship — *Apr 2023 – Oct 2023, Full-time*

- Supervised by Dr. Nguyen Van Nam to complete a 6-month internship with two projects: solving table-to-text challenge and tackling text-to-SQL problem using LLMs.
- Ranked in the top 5 of the DS/AI group during the second stage of the internship.

Computational Linguistics Center, HCMUS-VNUHCM — Ho Chi Minh, Vietnam
Undergraduate Research Assistant — *May 2022 – Present*

- Worked as a research assistant, assisting with data analysis and data management for text-to-code problems and large language model applications.
- Collaborated with a team of researchers, compiled research findings for the team and contributed to project reports and presentations about large language models.

AI VIET NAM Ho Chi Minh, Vietnam
AI Research and Development Intern *Sep 2022 – Jun 2023*

- Led a team of six members in a code summarization project for developing a simple but highly interactive Streamlit application to generate docs from Python code.
- Worked in the Daily Math Team, creating math exercises for ML and DL.
- Translated TensorFlow-based project source code into the PyTorch framework to support the AIO2022 community.

Awards & Achievements

Several Scholarships at The University of Science: Half-fee scholarship 2020-2021, Top 5% students in Advanced Program in Computer Science 2022, Semester Support Scholarship for top 10% APCS students, Full-fee scholarship 2021-2022.

2nd price in the 4th AI Challenge Ho Chi Minh City 2023: Worked in conjunction with a team named "Again," consisting of four members and implemented an image-text matching pipeline for the efficient retrieval of images from a vast database of 2 million photos using text descriptions.

Projects

Image Segmentation – Computer Vision Personal project | *GitHub*

- Developed an object segmentation model by reimplementing the U-Net architecture in Python and PyTorch to segment pet images in the Oxford-IIIT Pet Dataset.
- Performed data pre-processing, including image resizing, normalization, and augmentation, to prepare the dataset for model training.

Machine Translation Application – Deep Learning Web Application | *GitHub*

- Fine-tuned mBART50 deep learning model for Eng-Vi translation on IWSLT'15 English-Vietnamese data.
- Connected the NodeJS front-end webpage to the Python back-end server using the Flask framework, enabling seamless communication between the client and server.

Android Object Detection – Deep Learning Android Application | *GitHub*

- Developed an Android application using Android Studio to perform real-time object detection using the device's camera.
- Optimized the EfficientDet model in terms of inference speed and battery consumption by using quantization techniques with TensorFlow Lite.

Skills and Technologies

Languages: Python, C/C++, Java, R, Shell, JavaScript.

Technologies: Git/Gitlab, Machine Learning, Deep Learning, Docker, Docker Compose.

Frameworks: NumPy, Pandas, PyTorch, HuggingFace, TensorFlow, Scikit-learn, FastAPI, llama.cpp, LangChain, OpenCV, YOLO.

Certificates

TensorFlow Developer Certificate *Jul 2023*
Developing CV, NLP models with TensorFlow

Deep Learning *Jun 2022*
by DeepLearning.AI