

(Thien-)Trang Nguyen(-Vu)

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EDUCATION

Bachelor of Data Science and Artificial Intelligence

Hanoi University of Science and Technology (HUST)

2019 - 2023

GPA: 3.89/4.0 (Overall), 3.95/4.0 (Major)

· Ranked 1st in Program.

RESEARCH INTERESTS

My research focuses on advancing Artificial Intelligence and Machine Learning with two primary objectives: enhancing **scalability** and **efficiency**, and ensuring **safety**, **privacy**, and **trustworthiness**. To achieve these goals, I am currently focusing on mixture of experts, backdoor attacks, and continual learning. Additionally, I have experience in optimal transport and model fusion.

PUBLICATIONS AND SUBMISSIONS

Mixture of Experts Meets Prefix Tuning in Continual Learning

Minh Nguyen, Huy Nguyen*, An Nguyen*, **Trang Nguyen***, Trang Pham*, Linh Ngo Van, Nhat Ho

Conference on Neural Information Processing Systems (NeurIPS), 2024.

NeuroMax: Enhancing Neural Topic Modeling via Maximizing Mutual Information and Group Topic Regularization

Duy-Tung Pham*, **Trang Nguyen***, Tung Nguyen*, Linh Ngo Van, Duc Anh Nguyen, Thien Huu Nguyen

Findings of Conference on Empirical Methods in Natural Language Processing (EMNLP), 2024.

Backdoor Attack in Prompt-based Continual Learning

Trang Nguyen, Anh Tran, Nhat Ho

Under review.

Statistical Advantages of Perturbing Cosine Router in Sparse Mixture of Experts

Huy Nguyen, Pedram Akbarian*, Trang Pham*, **Trang Nguyen***, Nhat Ho

Under review.

Fast Approximation of the Generalized Sliced-Wasserstein Distance

Dung Le*, Huy Nguyen*, Khai Nguyen*, **Trang Nguyen***, Nhat Ho

IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2024.

Continual Variational Dropout: A View of Auxiliary Local Variables in Continual Learning

Nam Le Hai*, **Trang Nguyen***, Linh Ngo Van, Thien Huu Nguyen, Khoat Than

Machine Learning journal.

On Cross-Layer Alignment for Model Fusion of Heterogeneous Neural Networks

Dang Nguyen, **Trang Nguyen**, Khai Nguyen, Dinh Phung, Hung Bui, Nhat Ho

IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2023.

Adaptive Prompting for Continual Relation Extraction: A Within-Task Variance Perspective

Minh Le, Tien Ngoc Luu, An Nguyen The, Thanh-Thien Le, **Trang Nguyen**, Thanh-Tung Nguyen Van, Linh Van Ngo, Thien Huu Nguyen

Under review.

EXPERIENCE

Research Resident

Machine Learning team, VinAI

Aug 2023 - Present

- Supervisor: [Prof. Nhat Ho](#), The University of Texas at Austin.
- Main research topics: mixture of experts, backdoor attack, continual learning, optimal transport.
- 4 accepted publications at NeurIPS, EMNLP, ICASSP, 3 submissions.
- Participated in Applied Rotation Projects, including reproducing text-to-image diffusion models with customized data and quantizing these models.

Data Scientist

Data Department, MB Bank

Mar 2023 - Aug 2023

- Worked on facial recognition project serving the employee attendance system at MB's headquarters.
- Participated in the project to analyze and build a recommendation system for mini-applications within the MB app.

Research Student

Data Science Laboratory, Hanoi University of Science and Technology

Apr 2021 - Oct 2022

- Supervisor: [Dr. Ngo Van Linh](#), Hanoi University of Science and Technology.
- Main research topics: continual learning.
- 1 accepted paper at Machine Learning journal.

Teaching Assistant

Hanoi University of Science and Technology

Jan 2022 - Jun 2022

- Teaching assistant for Artificial Intelligence course.

ACHIEVEMENTS

Valedictorian of the Data Science and AI Program

Sep 2023

Class 2023, HUST

Top 3% Paper Recognition

June 2023

ICASSP 2023

Talent Scholarships for Undergraduates

Dec 2021

A-class scholarships for students with excellent academic achievements at HUST

LANGUAGES

Vietnamese

Native

English

IELTS 8.0, graduated from Foreign Language Specialized School (High School)

PROFESSIONAL SERVICES

Reviewer at AISTATS 2024, AISTATS 2025.

REFERENCES

Prof. Nhat Ho

Assistant Professor, The University of Texas at Austin

Dr. Ngo Van Linh

Lecturer, Hanoi University of Science and Technology