# (Thien-)Trang Nguyen(-Vu)

nguyenvuthientrang | ♠ nguyenvuthientrang | ♠ thientrangnguyenvu | ► thientrangngu@gmail.com | ♠ +(84)986328141

# EDUCATION

### Bachelor of Data Science and Artificial Intelligence

Hanoi University of Science and Technology (HUST) 2019 - 2023

 $\cdot$  Ranked 1st in Program.

### RESEARCH INTEREST

My research focuses on advancing Artificial Intelligence and Machine Learning with a strong emphasis on scalability, efficiency, and, most importantly, safety, privacy, and trustworthiness. I specialize in Mixture of Experts, Backdoor Attacks, and Continual Learning, complemented by experience in Optimal Transport and Model Fusion.

GPA: 3.89/4.0

# Publications and Submissions

## Mixture of Experts Meets Prefix Tuning in Continual Learning

Minh Nguyen, Huy Nguyen\*, An Nguyen\*, **Trang Nguyen**\*, Trang Pham\*, Linh Ngo, 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

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

# Continual Variational Dropout: A View of Auxiliary Local Variables in Continual Learning *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.
- · 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

- · Main research topics: continual learning.
- · Supervisor: Dr. Ngo Van Linh, Hanoi University of Science and Technology.
- · 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

# Dr. Nhat Ho

Assistant Professor, The University of Texas at Austin

# Dr. Ngo Van Linh

Lecturer, Hanoi University of Science and Technology