

PERSONAL OVERVIEW

Computer Science Ph.D. student at Washington State University. I am currently working on probabilistic machine learning with a focus on uncertainty quantification and scientific applications.

EXPERIENCE

Ph.D. Research Assistant
Washington State University

August 2024 – Present
Pullman - USA

- Supervisor: [Prof. Nghia Hoang](#)
- Currently working on probabilistic methods for deep learning models.

AI Research Engineer
FPT Software

January 2024 – July 2024
Hanoi - Vietnam

- Supervisor: [Dr. Khuong Nguyen](#)
- Built and developed LLMs for chatbot for FPT Retails.

AI Research Engineer
FPT Software

July 2023 – December 2023
Hanoi - Vietnam

- Supervisor: [Prof. Tan Nguyen](#)
- Worked on Battery Lifetime Prediction project with Toyota Research.

AI Research Resident
FPT Software

May 2021 – July 2023
Hanoi - Vietnam

- Supervisor: [Prof. Tan Nguyen](#)
- Worked as a research resident and conducted research on Transformers, Gaussian Processes, NeuralODEs and Graph Neural Networks (GNNs).
- Designed calibration methods to build trustworthy and robust Transformers.
- Worked on novel theoretical frameworks for Transformers in order to design more efficient Transformers with less computational costs. A paper on this direction was accepted to **ICASSP 2023**.
- Utilized mathematical tools to design novel NeuralODEs and continuous GNNs.

Research Assistant
BKAI lab, Hanoi University of Science and Technology

Jan 2021 – June 2021
Hanoi, Vietnam

- Research assistant under the supervision of [Dr. Nguyen Phi Le](#).
- Used Graph Deep Learning models to predict the air quality measured by sensors placed in various locations in Hanoi. Our method achieved higher performance than the baseline methods.

AI Engineer Intern
Zent Education

Jan 2020 – March 2021
Hanoi, Vietnam

- Implemented the YOLO and Tesseract optical character recognition (OCR) models to detect and extract text information from customers' ID cards for Know Your Customer (KYC) purpose.
- Implemented face detection and recognition algorithms for the company's attendance system.

TECHNICAL SKILLS

- Programming** : Python (PyTorch, NumPy, Matplotlib, Pandas. etc.), C/C++, HTML/CSS, JavaScript, SQL, Git
- Mathematics** : Algebra, Calculus, Probability, Statistics, Optimization, Differential Equations
- Soft Skills** : Time Management, Teamwork, Presentation, Problem-solving, Logical Thinking
- Languages** : English, Vietnamese

EDUCATION

Washington State University

PhD. in Computer Science

Pullman, Washington

Aug 2024 - Present

- PhD advisor: Professor Nghia Hoang

Hanoi University of Science and Technology (HUST)

Bachelor in Applied Mathematics and Informatics - Talented Bachelor Program

Hanoi, Vietnam

Sept 2018 - Oct 2022

- Thesis: Monotone Variational Inequality Problems and Applications to Optimization
- Thesis advisor: Dr. Thuy Nguyen

ACHIEVEMENTS

EECS Graduate Fellowship Fund

Washington State University

January 2025

- Awarded the EECS Graduate Fellowship Fund from the School of Electrical Engineering and Computer Science at Washington State University for the Spring 2025 semester.

ICASSP 2023 top 3% accepted paper

IEEE ICASSP

June 2023

- Attended ICASSP 2023 in person in Rhodes, Greece.

FPT Software AI Center Hackathon

Runner-up

Hanoi, Vietnam

March 2023

- Second place out of 12 teams
- Product: NoiseFree: Deep-learning based noise reducer solution for audio recording

Physics Contest for talented high school students

Runner-up

Hanoi, Vietnam

June 2017

CERTIFICATIONS

Coursera specialization : Machine Learning Engineering for Production (MLOps) [[Link](#)]

1. Machine Learning Data Lifecycle in Production
2. Machine Learning Modeling Pipelines in Production

Coursera course: Certificate by DeepLearning.AI - Natural Language Processing with Attention Models

LinkedIn course: Career Essentials in Generative AI by Microsoft and LinkedIn

PUBLICATIONS

Conference Paper

- **Long Minh Bui**, Tho Tran Huu, Duy Dinh, Tan Minh Nguyen, Trong Nghia Hoang. "Revisiting Kernel Attention with Correlated Gaussian Process Representation" The 40th Conference on Uncertainty in Artificial Intelligence
- Nguyen, Tan M., Tam Nguyen, **Long Bui**, Hai Do, Duy Khuong Nguyen, Dung D. Le, Hung Tran-The, Nhat Ho, Stan J. Osher, and Richard G. Baraniuk. "A Probabilistic Framework for Pruning Transformers Via a Finite Admixture of Keys." In ICASSP 2023-2023 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), pp. 1-5. IEEE, 2023. (*top 3% accepted paper*)