

RESEARCH INTERESTS

I'm interested in Machine Learning and its application in general, data-efficient and robust machine learning methods in specific. Currently, I mainly focus on deep generative models (VAEs, GANs) for sequential data with physics information from epidemiology problems. Previously, I worked on different ML topics such as Active Learning techniques, Bayesian Neural Networks, and Distributionally Robust Optimization.

ACADEMIC BACKGROUND

The University of Iowa

Ph.D. in Computer Science - Advised by Dr. [Bijaya Adhikari](#)
Expected graduation: May, 2027

Iowa City, USA

Aug. 2022 – Present

Hanoi University of Science and Technology (HUST)

B.Sc. in Information Systems
Excellence degree (5-year program), GPA 3.63/4.0

Hanoi, Vietnam

Aug. 2014 – Mar. 2019

TECHNICAL SKILLS

Programming Languages: Python, Java, JavaScript, and C/C++

Web-based: HTML/CSS/JS, NodeJS, ReactJS

Databases: MySQL, MongoDB, Aerospike

RESEARCH WORKS

[Epi-VAEGAN: On extremely limited epidemiological data augmentation](#)

****Hieu Vu**, [Bijaya Adhikari](#)*
Ongoing submission, 2023

[Implicit Neural Network for Dynamic Graphs](#)

*Yongjian Zhong, ***Hieu Vu**, [Tianbao Yang](#), [Bijaya Adhikari](#)*
Ongoing submission, 2023

[Distributionally Robust Fair Principal Components via Geodesic Descents](#)

****Hieu Vu**, [Toan Tran](#), [Man-Chung Yue](#), [Viet Anh Nguyen](#)*
ICLR, 2022

[Bayesian Metric Learning for Robust Training of Deep Models under Noisy Labels](#)

****Hieu Vu**, [Toan Tran](#), [Gustavo Carneiro](#)*
preprint, 2020

[MAP Estimation With Bernoulli Randomness, and Its Application to Text Analysis and Recommender Systems](#)

*Xuan Bui, ***Hieu Vu**, [Oanh Nguyen](#), [Khoat Than](#)*
IEEE Access, 2020

RESEARCH EXPERIENCES

VinAI Research

Research Resident

Hanoi, Vietnam

Nov. 2019 – Jan. 2022

- Advised by: Dr. [Toan Tran](#), Dr. [Viet Anh Nguyen](#)
- Main research topics: Bayesian Neural Networks, Active Learning, Distributionally Robust Optimization
- Gained Backgrounds: Linear Algebra, Probability & Statistics, Deep Generative Models, Robust Optimization

Data Science Lab, HUST

Undergraduate Research Assistant

Hanoi, Vietnam

Jun. 2017 – Jun. 2019

- Advised by: Dr. [Khoat Than](#)
- Main research topics: Topic models, Hierarchical models
- Gained backgrounds: Linear Algebra, Probability & Statistics, Topic modeling methods

INDUSTRIAL EXPERIENCES

VinAI Research

AI Engineer

Hanoi, Vietnam

Jan. 2022 – June. 2022

- Develop models and apply Active Learning techniques for 2D & 3D object detection tasks, frameworks: [MMDetection3d](#), [YOLOv5](#)
- Clustering analysis: KMeans, Gaussian mixture, Hierarchical clustering, DBSCAN, ...

VC Corporation

Software developer

Hanoi, Vietnam

Jun. 2018 – Aug. 2019

- Text mining, recommendation system for news articles using ML models
- Build micro-service web server
- Frameworks: Flask, Java-Jersey, Jetty framework, MySQL, Aerospike, Kafka

AWARDS AND CERTIFICATES

Excellence scholarship for the academic year of 2018 – 2019

Granted for top 1% students with highest CPA of School of Information and Communication Technology, HUST

REFERENCES

Dr. Bijaya Adhikari

The University of Iowa

✉ bijaya-adhikari@uiowa.edu

Dr. Toan Tran

VinAI Research, Hanoi, Vietnam

✉ v.toantm3@vinai.io

Dr. Viet Anh Nguyen

Chinese University of Hong Kong

✉ nguyen@se.cuhk.edu.hk

Dr. Khoat Than

Hanoi University of Science and Technology

✉ khoattq@soict.hust.edu.vn