

## RESEARCH INTERESTS

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I am interested in data-efficient and robust machine learning methods. Currently, I mainly focus on the techniques of Active Learning for selecting informative samples, the applications of Bayesian Inference and Distributionally Robust Optimization for enhancing the quality and robustness of ML models.

## ACADEMIC BACKGROUND

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**Hanoi University of Science and Technology (HUST)**

*Excellence Degree of Engineer in Information Systems, CPA 3.63/4.0*

Hanoi, Vietnam

Aug. 2014 – Mar. 2019

## SELECTED AWARDS

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**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*

## NOTABLE RESEARCH WORKS

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**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

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**Research Resident**

*VinAI Research*

Nov. 2019 – Present

*Hanoi, Vietnam*

- Supervisors: [Toan Tran](#) (Research Scientist, VinAI Research), [Viet Anh Nguyen](#) (Research Scientist, VinAI Research)
- Main research topics: Robust methods for noisy label data, Active Learning, Domain Adaptation
- Gained Backgrounds: Linear Algebra, Statistics, Deep Generative Models, Robust Optimization

**Undergraduate Research Assistant**

*Data Science Lab, School of Information and Communication Technology, HUST*

Jun. 2017 – Jun. 2019

*Hanoi, Vietnam*

- Supervisors: [Khoat Than](#) (Associate Professor, HUST)
- Main research topics: Topic models
- Gained backgrounds: Linear Algebra, Topic modeling methods

## INDUSTRIAL EXPERIENCES

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### Applied Rotation Program Resident

*VinAI Research*

Jun. 2021 – Sep. 2021

*Hanoi, Vietnam*

- Supervisor: [Binh-Son Hua](#) (Research Scientist, VinAI Research)
- Develop models to detect objects in 3D space based on point cloud data
- Learned technologies: [MMDetection3d](#) framework

### Software developer

*VC Corporation*

Jun. 2018 – Aug. 2019

*Hanoi, Vietnam*

- Develop recommendation system for news articles using ML models: RNN-based and CNN-based
- Build micro-service web server
- Learned technologies: Flask, Java-Jersey, Jetty framework, MySQL, Aerospike, Kafka

## SKILLS

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**Spoken Languages:** English (Fluent - IELTS 7.5), Vietnamese (Native)

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

**Technologies:** Web-based: HTML/CSS/JS, ExpressJS, ReactJS; Databases: MySQL, MongoDB, Aerospike