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Research interests

- Developing efficient and scalable machine-learning algorithms for large-scale datasets and architectures.
- Improving model robustness by addressing challenges such as distribution shift, label noise, data poisoning, and spurious correlations.

Education

University of California, Los Angeles

California, USA

Ph.D. in Computer Science

Sep. 2023 - Present

- Advised by Professor Baharan Mirzasoleiman
- UCLA Graduate Dean's Scholar Award

Toyo University

Tokyo, Japan

B.S. in Information Networking for Innovation and Design

Apr. 2017 - Mar. 2021

- Toyo Top Global Scholarship A
- GPA: 4.27/4.3, Top 1/300 in the faculty

Experience _____

VinAlHanoi, Vietnam

Al Resident Oct. 2020 - Aug. 2023

- Main research topics: Optimal Transport and Model Fusion.
- Collaborated with Professor Nhat Ho (Department of Statistics and Data Sciences, University of Texas at Austin) and AI residents on multiple research projects about Optimal Transport and Model Fusion.
- Participated in an applied project which aims to improve the performance of object detectors in low-light conditions.
- Managed GPU resources for the VinAl Residency Program.

FPT Japan Holdings Yokohama, Japan

Part-time Machine Learning Engineer

Oct. 2019 - Sep. 2020

• Participated in a long-term demand forecasting project for a chain pharmacy company in Japan.

Publications

(*) denotes equal contribution

- 1. X. Yihao, S. Joshi, **D. Nguyen**, and B. Mirzasoleiman, "Understanding the Robustness of Multi-modal Contrastive Learning to Distribution Shift", *International Conference on Learning Representations (ICLR)*, 2024.
- 2. K. Nguyen*, **D. Nguyen***, N. Ho, "Self-Attention Amortized Distributional Projection Optimization for Sliced Wasserstein Point-Cloud Reconstruction", *International Conference on Machine Learning (ICML)*, 2023.
- 3. **D. Nguyen**, T. Nguyen, K. Nguyen, D. Phung, H. Bui, and N. Ho, "On cross-layer alignment for model fusion of heterogeneous neural networks", *IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, 2023.
- 4. K. Nguyen*, **D. Nguyen***, T. A. V. Le, T. Pham, and N. Ho, "Improving mini-batch optimal transport via partial transportation", *International Conference on Machine Learning (ICML)*, 2022.
- 5. K. Nguyen, **D. Nguyen**, Q. Nguyen, T. Pham, H. Bui, D. Phung, T. Le, and N. Ho, "On transportation of mini-batches: A hierarchical approach", *International Conference on Machine Learning (ICML)*, 2022.

Professional services

- Reviewer at Conference on Neural Information Processing Systems (NeurIPS) 2022-2023
- Reviewer at the International Conference on Artificial Intelligence and Statistics (AISTATS) 2023-2024
- Reviewer at the International Conference on Machine Learning (ICML) 2023-2024
- Reviewer at the International Conference on Learning Representations (ICLR) 2024

Honors & Awards

INTERNATIONAL

2023 UCLA Graduate Dean's Scholar Award, UCLA
 2017 Toyo Top Global Scholarship A, Toyo University
 2015 Silver medal, 56th International Mathematical Olympiad

California, USA
Tokyo, Japan
Chiang Mai, Thailand

DOMESTIC

First Prize, Vietnam Mathematical Olympiad
 Second Prize, Vietnam Mathematical Olympiad
 Hanoi, Vietnam
 Hanoi, Vietnam

Extracurricular Activities

Al Day 2022

Poster presenter · Panel speaker

Aug. 2022

FPT Young Talents

Hanoi, Vietnam

Member 2015 - 2017

Technical skills ____

DevOps Linux, Docker

Programming Python, C/C++, MATLAB

Libraries Pytorch, TensorFlow, NumPy, etc.

Languages _____

English IELTS Overall 7.5: L 8, R 8, W 7.5, S 6.5

Japanese JLPT N2 Vietnamese Native