Dang **Nguyen**

CS PH.D. STUDENT

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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

VinAI

Hanoi, Vietnam

AI 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 VinAI 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. In Proceedings of the 12th International Conference on Learning Representations, 2024.
2. K. Nguyen*, **D. Nguyen***, N. Ho. Self-Attention Amortized Distributional Projection Optimization for Sliced Wasserstein Point-Cloud Reconstruction. In Proceedings of the 40th International Conference on Machine Learning, 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. In Proceedings of the 48th IEEE International Conference on Acoustics, Speech, and Signal Processing, 2023.
4. K. Nguyen*, **D. Nguyen***, T. A. V. Le, T. Pham, and N. Ho. Improving mini-batch optimal transport via partial transportation. In Proceedings of the 39th International Conference on Machine Learning, 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. In Proceedings of the 39th International Conference on Machine Learning, 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 — *California, USA*
2017 **Toyo Top Global Scholarship A**, Toyo University — *Tokyo, Japan*
2015 **Silver medal**, 56th International Mathematical Olympiad — *Chiang Mai, Thailand*

Domestic

2015 **First Prize**, Vietnam Mathematical Olympiad — *Hanoi, Vietnam*
2014 **Second Prize**, Vietnam Mathematical Olympiad — *Hanoi, Vietnam*

Extracurricular Activities

AI Day 2022 — *Hanoi, Vietnam*
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