

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.
- Exploring Generative AI, Multimodal Learning, and Large Language Modeling (LLM), with a particular focus on enhancing math reasoning and prioritizing data efficiency perspectives.

Education

University of California, Los Angeles

Ph.D. in Computer Science

California, USA

Sep. 2023 - Present

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

Toyo University

B.S. in Information Networking for Innovation and Design

Tokyo, Japan

Apr. 2017 - Mar. 2021

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

Experience

VinAI

AI Resident

Hanoi, Vietnam

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

Part-time Machine Learning Engineer

Yokohama, Japan

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	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