

Dang Nguyen

CS PH.D. STUDENT

☎ (+1) 310-254-4895 | ✉ nguyentuanhaidang@gmail.com | 🏠 hsgser.github.io | 📷 [hsgser](#) | 📄 [dang-nguyen-50b7a7a0](#) | 🎓 Dang Nguyen

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

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. Y. Xue, J. Siddharth, **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.

Preprints

(*) denotes equal contribution

1. D. Nguyen, P. Haddad, E. Gan, and B. Mirzasoleiman. Make the Most of Your Data: Changing the Training Data Distribution to Improve In-distribution Generalization Performance. Under review, 2024.

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

Poster presenter · Panel speaker

Hanoi, Vietnam

Aug. 2022

FPT Young Talents

Member

Hanoi, Vietnam

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 |