Nguyen Nang Hung

Suitor of Reasons

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Education

October 2025 – Now

[*Master Student*] **The University of Tokyo (UTokyo)**
Computer Science
- Supervised by Prof. Masashi Sugiyama at Sugiyama-Yokoya-Ishida Lab
- At Department of Complexity Science and Engineering, the Graduate School of Frontier Sciences (GSFS), Kashiwa Campus

Aug 2018 – Sep 2023

[*Engineer, Graduated*] **Hanoi University of Science and Technology (HUST)**
Computer Science
- The School of Information Communication and Technology (SoICT)
- Higher Education Development Support Project on ICT for Japan (HEDSPI)
- GPA: 4.0/4.0; CPA: 3.58/4.0

Publications

Transaction Papers

1. **Nang Hung Nguyen** and Phi Le Nguyen and Thao Nguyen Truong and Trong Nghia Hoang and Masashi Sugiyama, **Causal Graph Learning via Distributional Invariance of Cause-Effect Relationships**, in Transactions on Machine Learning Research (TMLR), ISSN 2835-8856, January 2026. [OpenReview, Code]
2. **Nang Hung Nguyen**, Truong Thao Nguyen, Trong Nghia Hoang, Huy Hieu Pham, Thanh Hung Nguyen and Phi Le Nguyen, **SAFA: Handling Sparse and Scarce Data in Federated Learning With Accumulative Learning**, in IEEE Transactions on Computers, vol. 74, no. 6, pp. 1844-1856, June 2025, doi: 10.1109/TC.2025.3543682. [Paper, Code]
3. Phi Le Nguyen, **Nang Hung Nguyen**, Tuan Anh Nguyen Dinh, Khanh Le, Thanh Hung Nguyen and Kien Nguyen, **QIH: An Efficient Q-Learning Inspired Hole-Bypassing Routing Protocol for WSNs**, in IEEE Access, vol. 9, pp. 123414-123429, 2021, doi: 10.1109/ACCESS.2021.3108156. [Paper]

Conference Papers

1. **Nguyen Nang Hung**, Phi Le Nguyen, Nguyen Trong Bang, Nguyen Duc Long, Thao Nguyen Truong, Huy Hieu Pham, **CADIS: Handling Cluster-skewed Non-IID Data in Federated Learning with Clustered Aggregation and Knowledge DIStilled Regularization**, the 23rd International Symposium on Cluster, Cloud and Internet Computing (*CCGRID'23*), Bangalore, India, 2023, pp. 249-261, doi: 10.1109/CCGrid.57682.2023.00032. [Paper, Code]
2. **Nang Hung Nguyen**, Phi Le Nguyen, Thuy Dung Nguyen, Trung Thanh Nguyen, Duc Long Nguyen, Thanh Hung Nguyen, Huy Hieu Pham and Truong Thao Nguyen, **FedDRL: Deep Reinforcement Learing-based Federated Learning for Real-World Non-IID Data**, 2022 International Conference on Parallel Processing (*ICPP'22*), pp. 1-11, August 2022, doi: 10.1145/3545008.3545085. [Paper]
3. Hieu Dinh and **Nguyen Nang Hung** and Trung Thanh Nguyen and Thanh-Hung Nguyen and Truong Thao Nguyen and Phi Le Nguyen, **Deep Reinforcement Learning-based Offloading for Latency Minimization in 3-tier V2X Networks**, the 2022 IEEE Wireless Communications and Networking Conference (*WCNC'22*), Austin, TX, USA, 2022, pp. 1803-1808, doi: 10.1109/WCNC.51071.2022.9771583. [Paper]

Fields of interest

1. Causal Learning, Graph Structure Learning
2. Statistical Analysis, Density Estimation
3. Representation Learning
4. Distributed optimization in federated systems

Research Experience and Projects

October 2025 - Now

MSLab, the Graduate School of Frontier Sciences (GSFS), UTokyo
Master Student: Study the complexity of causal discovery in large-scale scenarios and deep representation spaces.

- *Supervisor*: Prof. Masashi Sugiyama
- *Co-superviors*: Prof. Phi Le Nguyen, Dr. Thao Nguyen Truong, Dr. Hoang Trong Nghia
- *Description*: Causal variables are often hidden in observational systems. In this study, I want to reveal their true selves by delving into their representations in latent spaces.

April 2024 - September 2025

MSLab, the School of Information Science and Technology (IST), UTokyo
Research Student: Develop and enhance causality-aware mechanisms in machine learning and deep learning models.

- *Supervisor*: Prof. Masashi Sugiyama
- *Co-superviors*: Prof. Phi Le Nguyen, Dr. Thao Nguyen Truong, Dr. Hoang Trong Nghia
- *Description*: Investigate and develop algorithms to uncover the hidden structure given the observational data.

Jun 2021 - April 2024

VinUni-Illinois Smart Health Center (VISHC), VinUniversity
Research Assistant - VAIPE project: AI-assisted IoT-enabled smart, optimal, and Protective healthcare monitoring and supporting system for Vietnamese.

- *Supervisor*: Prof. Phi Le Nguyen and Dr. Pham Huy Hieu
- *Description*: Investigating and proposing new Federated Learning models, especially for non-iid real world data (e.g. pill data).

July 2019 - April 2024

Intelligent Communication Networks research group at BKAI center, HUST
Research Assistant - Routing Protocols/ Charging Algorithms in WRSNs, Offloading in MEC

- *Supervisor*: Prof. Phi Le Nguyen and Dr. Thanh Hung Nguyen
- *Description*: Applying deep learning methods for multivariate optimization in (rechargeable) wireless sensor / mobile edge computing networks.

Online Certifications

- **NVIDIA-Certified Associate: GenAI LLMs** - NVIDIA (Digital Badge / Certification here)
- **NVIDIA-Certified Associate: GenAI Multimodal** - NVIDIA (Digital Badge / Certification here)
- **NVIDIA-Certified Associate: AI Infrastructure and Operations** - NVIDIA (Digital Badge / Certification here)
- **Machine Learning** - Coursera *(Credential ID: S74W3X7M7FGV)*
- **Deep Learning Specialization** - Coursera *(Credential ID: 6VM5WPB25JXB)*
- **Reinforcement Learning** - Coursera *(Credential ID: S9MA55SQ3E25)*

Skills

Programmmig Languages	Python, C/C++, etc (*honestly, in the AI era, any language is "prompting language"*)
Deep Learning Frameworks	Pytorch, TensorFlow
Data analysis tools	Jupyter Notebook, Rstudio, Matlab
Others	Teamwork, Presentation

Languages

- Vietnamese (Mother tongue)
- Japanese (JLPT N3 - 2020)
- English (IELTS 7.5/9.0 - 2022, TOEFL 110/120 – 2025)

Honor and Award

2024 - 2027 | **MEXT Scholarship**, *the University of Tokyo*
Research topic: Causality-integrated machine learning/deep learning models.

2023 | **Best paper finalist award**, *The 23rd International Symposium on Cluster, Cloud and Internet Computing*
Best paper on track "Machine Learning for Systems"

2023 | **First place at Student Scientific Research Contest**, *Hanoi University of Science and Technology*

2021 | **Third place at Student Scientific Research Contest**, *Hanoi University of Science and Technology*

2019-2020 | **Excellence Scholarship**, *Hanoi University of Science and Technology*
Rewarded for top 1% students with highest CPA.

References

Prof. Masashi Sugiyama
Director, Center for Advanced Intelligence Projects, RIKEN, Japan
Professor, the University of Tokyo, Japan
Email: sugi@k.u-tokyo.ac.jp

Prof. Phi Le Nguyen
Acting Director, Institute for AI Innovation and Societal Impact (AI4LIFE)
Hanoi University of Science and Technology
Email: lenp@soict.hust.edu.vn

Prof. Hoang Trong Nghia
Professor, School of Electrical Engineering and Computer Science
Voiland College of Engineering and Architecture, Washington State University, Pullman, Washington, US
Email: trongnghia.hoang@wsu.edu

Dr. Thanh Hung Nguyen
Director, Department of Training and Education
Hanoi University of Science and Technology
Email: hungnt@soict.hust.edu.vn

Dr. Pham Huy Hieu
Associate Director, VinUni-Illinois Smart Healthcare Center
College of Engineering & Computer Science, VinUniversity
Email: hieu.ph@vinuni.edu.vn