

QUANG-HUY (PERCY) NGUYEN

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RESEARCH INTERESTS

My research focuses on developing **reliable machine learning** for real-world problems, with an emphasis on **quantifying** uncertainty, **learning** with imperfect data, and **generalizing** under distribution shift.

EDUCATION

- **Ph.D. in Electrical Engineering** 2026 – 2029 (*expected*)
College of Engineering, **Boston University** (transferred from OSU)
 - **Ph.D. Advisor:** Prof. [Wei-Lun \(Harry\) Chao](#)
- **Ph.D. Studies in Computer Science and Engineering** 2024 – 2026
College of Engineering, **The Ohio State University**
- **B.Eng. in Computer Engineering** 2015 – 2020
University of Information Technology, **Vietnam National University - Ho Chi Minh City**

RESEARCH EXPERIENCE

- **Graduate Research Assistant – ECE, Boston University** Sep 2026 – Present
Advised by: Prof. [Wei-Lun \(Harry\) Chao](#) Boston, MA
 - Behavioral representation learning for animal identity and learning progression from brief movement sequences.
 - Multi-instance learning for pancreatic precancer diagnosis from noisy, weakly supervised nCLE videos.
- **Graduate Research Associate – CSE, The Ohio State University** Aug 2024 – Aug 2026
Advised by: Prof. [Wei-Lun \(Harry\) Chao](#) Columbus, OH
 - Few-shot learning for pancreatic precancer diagnosis from nCLE videos.
 - Self-supervised learning and parameter-efficient fine-tuning for visual foundation models.
- **AI Research Resident – FPT Software AI Residency Program** Aug 2023 – Jul 2024
Advised by: Prof. [Dung D. Le](#) Ho Chi Minh City, Vietnam
 - Zero-shot out-of-distribution object detection with conditioned diffusion models.
- **Research Assistant – CECS, VinUniversity** Nov 2022 – Jul 2023
Advised by: Prof. Dung D. Le Ha Noi, Vietnam
 - Pareto front learning for black-box multi-objective optimization.
- **Research Assistant – VinUni-Illinois Smart Health Center, VinUniversity** Jan 2022 – Jun 2022
Advised by: Profs. Dung D. Le and Hieu H. Pham Ha Noi, Vietnam
 - Few-shot learning for medical image analysis.

PRE-PRINTS AND PUBLICATIONS

* Equal contribution.

- [1] Ping Zhang*, **Quang-Huy Nguyen***, Yingtie Lei*, Sameera Shridhar, Zachary Leveroni, Ellie Quattrocchi, Jai Y. Yu, and Wei-Lun Chao. [Representing Short-Term Movement to Reveal Animal Identity and Learning Progress](#). *arXiv 2026*.
- [2] **Quang-Huy Nguyen***, Jin Zhou*, Zhenzhen Liu*, Khanh-Huyen Bui, Kilian Q. Weinberger, Wei-Lun Chao, and Dung D. Le. [Detecting Out-of-Distribution Objects through Class-Conditioned Inpainting](#). *WACV 2026*.
- [3] Zheda Mai, Ping Zhang, Cheng-Hao Tu, Hong-You Chen, **Quang-Huy Nguyen**, Li Zhang, and Wei-Lun Chao. [Lessons and Insights from a Unifying Study of Parameter-Efficient Fine-Tuning \(PEFT\) in Visual Recognition](#). *CVPR 2025 (highlight, top 2.98%)*.

- [4] Ping Zhang*, Zheda Mai*, **Quang-Huy Nguyen**, and Wei-Lun Chao. [Revisiting Semi-Supervised Learning in the Era of Foundation Models](#). *NeurIPS 2025*.
- [5] Minh-Duc Nguyen, Phuong M. Dinh, **Quang-Huy Nguyen**, Long P. Hoang, and Dung D. Le. [Improving Pareto Set Learning for Expensive Multi-objective Optimization via Stein Variational Hypernetworks](#). *AAAI 2025*.
- [6] **Quang-Huy Nguyen**, Cuong Q. Nguyen, Dung D. Le, and Hieu H. Pham. [Enhancing Few-shot Image Classification with Cosine Transformer](#). *IEEE Access 2023*.

RESEARCH EXPERTISE

- **Machine Learning:** Learning with Limited & Imperfect Data, Uncertainty Quantification, Out-of-Distribution Detection
- **Representation Learning:** Temporal and Behavioral Representation Learning
- **Scientific Applications:** Medical Imaging, Animal Behavior Analysis
- **Technical Tools:** Python, PyTorch, Linux, SLURM/HPC, Weights & Biases