Toan Gian

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Education

Northeastern University — **Boston, MS, US**
PhD, Electrical Engineering — *Jan 2025 – Now*

Hanoi University of Science and Technology (HUST) — **Hanoi, Vietnam**
BS, Electrical Engineering — *Sep 2018 – Sep 2023*

Research Experience

MENTIS Laboratory, Northeastern University — **Jan 2025 – Now**
Ph.D. Student — *Boston, MA, USA*

AI/ML in Next-generation Multi-agent Control Systems: Develop a scalable and low-latency framework for multi-agent systems that minimizes resource usage (*e.g.*, computing, energy, and memory), enabling reliable operation in constrained environments.

ICC Laboratory, VinUniversity — **July 2023 – Dec 2024**
Research Assistant — *Hanoi, Vietnam*

WiFi-enabled Human Pose Estimation: Develop an efficient DNN model using WiFi signals for human pose estimation, achieving state-of-the-art accuracy with minimal computational cost.

AIoT laboratory, Phenikaa University — **Feb 2022 – Jun 2023**
Research Assistant — *Hanoi, Vietnam*

DL-based Signal Detector for Communication Systems: Develop a DNN-based signal detector for NOMA systems, achieving near-optimal performance compared to the existing methods with low complexity.

Industry Experience

Bosch Global Software Technologies Co., Ltd (BGSV) — **Aug 2022 – Feb 2023**
AI Intern - Global Talent Internship Program — *Hanoi, Vietnam*

Object detection and object tracking in front of the vehicle using front view camera: Develop a DL model for real-time object detection and tracking using a vehicle's front-view camera.

Selected Publications

Journal Papers:

- **Toan Gian**, Dung Trung Tran, Van-Dinh Nguyen. **Multi-Modal Human Pose Estimation: A Wi-Fi–Driven Approach with Adaptive Kernel Selection**. *IEEE Transactions on Artificial Intelligence.* **(Q1, IF = 6.4)**
- Xuan Hoang Nguyen, Van-Dinh Nguyen, Quang-Trung Luu, **Toan Gian**, and Oh-Soon Shin. **Robust WiFi Sensing-based Human Pose Estimation Using Denoising Autoencoder and CNN with Dynamic Subcarrier Attention**. *The IEEE Internet of Things Journal.* **(Q1, IF = 8.9)**
- **Toan Gian**, Ngoc-Hung Pham, Van-Cuong Pham, Tien-Hoa Nguyen, Trung Tan Nguyen, and Thien Van Luong.**Deep Learning Detector for Downlink IM-NOMA**. *The Journal of Mobile Communication, Computation and Information (Wireless Networks).* **(Q2, IF = 2.1)** [Code]

Conference Papers:

- **Toan Gian**, Mohammad Abdi, Francesco Restuccia. **SDE-HARL: Scalable Distributed Policy Execution for Heterogeneous-Agent Reinforcement Learning**. *Association for the Advancement of Artificial Intelligence (AAAI) 2026* . **(A*, Accepted Rate: 17%)** [Code]
- **Toan Gian**, Tien Lai, Thien Van Luong, Kok-Seng Wong, and Van-Dinh Nguyen. **HPE-Li: WiFi-enabled Lightweight Dual Selective Kernel Convolution for Human Pose Estimation**. *European Conference on Computer Vision (ECCV) 2024.* **(A*, Accepted Rate: 21%)** [Code]

Honors and Awards

Fully Funded Ph.D. Scholarship. **2025-2029**
Northeastern University *Boston, MA, USA*

ECCV Travel Grant Award 2024. **Sep 2024**
European Conference on Computer Vision 2024 *Milan, Italia*

Best School of Electrical and Electronic Engineering Thesis Award. **Aug 2023**
Hanoi University of Science and Technology; Grade: 100/100 *Hanoi, Vietnam*

Global Scholarship Talent Internship Program. **Aug 2022**
Bosch Global Software Technologies *Hanoi, Vietnam*

SKILLS

Languages: Vietnamese (native), English (Toeic: 765/990, IELTS: 6.5, Duolingo English Test (DET): 105)
Framworks: Pytorch, Tensorflow/Keras.
Operator systems: Linux, Window.

REFEREES

Asst. Prof. Francesco Restuccia **Boston, MA, US**
Northeastern University

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- Francesco Restuccia

Asst. Prof. Van Dinh Nguyen **Dublin, Ireland**
Trinity College Dublin, Ireland

- dinh.nv2@vinuni.edu.vn
- Van Dinh Nguyen