TOAN GIAN

📞 +1 (617) 516-3475 ✉ Toan.g@northeastern.edu 🔗 Toan Gian ⌨ Toandinh1

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)** [Pdf]

- **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)** [Pdf] [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%)** [Pdf] [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%)** [Pdf] [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
- ✉ f.restuccia@northeastern.edu
- 👤 Francesco Restuccia

Asst. Prof. Van Dinh Nguyen   **Dublin, Ireland**
Trinity College Dublin, Ireland
- ✉ dinh.nv2@vinuni.edu.vn
- 👤 Van Dinh Nguyen