

# TOAN GIAN

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## Education

### Graduated Student in Electrical Engineering

*Northeastern University*

GPA: **3.5**/4.0

**Jan 2025 – Now**

*Boston, MS, US*

### Bachelor in Electrical Engineering

*Hanoi University of Science and Technology (HUST)*

- Best thesis award: “Deep Learning Detector for Downlink IM-NOMA System”
- Degree classification: Good
- GPA: **8.0**/10

**Sep 2018 – Sep 2023**

*Hanoi, Vietnam*

## Research Experience

### MENTIS Laboratory, Northeastern University

*Ph.D. Student*

**Jan 2025 – Now**

*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

*Research Assistant*

**July 2023 – Dec 2024**

*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

*Research Assistant*

**Feb 2022 – Jun 2023**

*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)

*AI Intern - Global Talent Internship Program*

**Aug 2022 – Feb 2023**

*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

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### Fully Funded Ph.D. Scholarship.

*Northeastern University*

**2025-2029**

*Boston, MA, USA*

### ECCV Travel Grant Award 2024.

*European Conference on Computer Vision 2024*

**Sep 2024**

*Milan, Italia*

### Best School of Electrical and Electronic Engineering Thesis Award.

*Hanoi University of Science and Technology; Grade: 100/100*

**Aug 2023**

*Hanoi, Vietnam*

### Global Scholarship Talent Internship Program.

*Bosch Global Software Technologies*

**Aug 2022**

*Hanoi, Vietnam*

## SKILLS

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**Languages:** Vietnamese (native), English (Toeic: 765/990, IELTS: 6.5, Duolingo English Test (DET): 105)

**Framworks:** Pytorch, Tensorflow/Keras.

**Operator systems:** Linux, Window.

## REFEREES

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### 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*

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