

# Khanh-Huyen Bui

☎ (+84) 387697257 | ✉ huyenbui117@gmail.com | 🌐 huyenbui117 | 📍 Hanoi, Vietnam

## EDUCATION

### BSc in Computer Science (Honors)

VNU University of Engineering and Technology – *Salutatorian*

GPA: 3.86/4.0 – *Ranked 2nd/153 of the Computer Science Department.*

Sep 2019 – Jun 2023

Hanoi, Vietnam

## WORK & RESEARCH EXPERIENCE

### AI Engineer

*AI Innovation Center (AI1), FPT Software*

Jul 2025 – Now

Hanoi, Vietnam

- Developed and maintained multi-agent systems, leveraging orchestration framework and runtime for building and managing long-running and stateful agents.
- Performed backend integration with automated workflows for scalable systems
- Successfully delivered multiple specialized multi-agent systems, receiving high customer satisfaction.

### Research Assistant

*Center for Environmental Intelligence (CEI), VinUniversity*

Apr 2024 – Jul 2025

Hanoi, Vietnam

- Developed methods to automate the process of material discovery. Published in two Q1 journals (IF 20 and 6.8).
- Advisors: **Prof. Dung D. Le** and **Prof. Tung Nguyen-Dang**.

### AI Research Resident

*AI Innovation Center (AI1), FPT Software*

Aug 2023 – Jul 2025

Hanoi, Vietnam

- Investigated multimodal generative AI for diverse applications, including text-to-image and LLM-based recommender systems. Published in EMNLP 2024 and WACV 2026.
- Resolved ambiguous search queries on an e-commerce site by proposing a hybrid ranking method that combines semantic and full-text search.
- Advisor: **Prof. Dung D. Le**.

### Undergraduate Research Assistant

*AI Laboratory/ Institute for Artificial Intelligent (UET-IAI)*

Mar 2022 – Jun 2023

Hanoi, Vietnam

- Developed an end-to-end system for automated Nuchal Translucency segmentation and measurement, spanning dataset preparation, model development, and performance evaluation.
- Achieved First prize in AI4VN challenges 2022: "VAIPE: Medicine Pill Image Recognition Challenge".
- Advisor: **Dr. Long Quoc Tran**.

### Undergraduate Research Assistant

*Data Science and Knowledge Technology Laboratory*

Dec 2020 – Feb 2022

Hanoi, Vietnam

- Constructed a Vietnamese multi-label e-commerce dataset and established baselines with traditional statistical ML models and CNN-PhoBERT.
- Enhanced performance by applying Word-Window Locating and Chi-Squared feature selection, achieving around 95% Micro/Macro F1. Published in KSE 2021.

## PUBLICATIONS

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(\*) *Equal contribution*

5. Quang-Huy Nguyen, Jin Peng Zhou, Zhenzhen Liu, **Khanh-Huyen Bui**, Kilian Q. Weinberger, Wei-Lun Chao, Dung D. Le. "**Detecting Out-of-Distribution Objects through Class-Conditioned Inpainting**". In *Proceedings of the Winter Conference on Applications of Computer Vision (WACV)*, 2026.
4. Zichao Rong, Zihao Chen, . . . , **Khanh-Huyen Bui**, . . . , Laurent El Ghaoui, Omar M. Yaghi. "**Algorithmic Iterative Reticular Synthesis of Zeolitic Imidazolate Framework Crystals**". In *Nature Synthesis*, 2025 (Q1 Journal, IF: 20.0).
3. Van-Hao Vu, **Khanh-Huyen Bui\***, Khoa D.D. Dang\*, Manh Duong-Tuan, Dung D. Le, Tung Nguyen-Dang. "**Finding Environmental-friendly Chemical Synthesis with AI and High-throughput Robotics**". In *Journal of Science: Advanced Materials and Devices*, 2025 (Q1 Journal, IF: 6.8).
2. Huy Quang Dao, Yang Deng, **Khanh-Huyen Bui**, Dung D. Le, Lizi Liao. "**Experience as Source for Anticipation and Planning: Experiential Policy Learning for Target-driven Recommendation Dialogues**". In *Findings of the Association for Computational Linguistics: EMNLP*, 2024.
1. Binh Le-Minh, Thi-Phuong Le, Khanh-Hung Tran, **Khanh-Huyen Bui**, Hoang-Quynh Le, Duy-Cat Can. "**Aspect-Based Sentiment Analysis Using Mini-Window Locating Attention for Vietnamese E-commerce Reviews**". In *Proceedings of the 13th International Conference on Knowledge and Systems Engineering (KSE)*, 2021.

## SELECTED HONORS & AWARDS

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<b>"Student with five good merits" Certificate – Central Level</b>	2022
Awarded to 85 students nationwide for excellence in: Academics, Ethics, Volunteerism, Physical Fitness, and Integration.	
<b>First Prize, AI4VN Challenge</b>	2022
Developed a medicine pill image recognition system; selected as best solution among 163 national teams.	
<b>Second Prize, National Student Physics Olympiad</b>	2021
<b>National Outstanding Female Student in Science and Technology</b>	2021
Awarded to 20 female STEM students nationwide for excellent academic performance.	
<b>Second Prize, Student Scientific Research Contest</b>	2021
Project: Aspect-oriented Vietnamese e-commerce sentiment analysis	
<b>Acquired Scholarships</b>	2019–2023
Vingroup Scholarship (2020–2021); Pony Chung Scholarship (2021–2022); UET Merit Scholarship (6 semesters).	

## SKILLS

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<b>Programming</b>	Python, Bash, C/C++, $\text{\LaTeX}$ , Java, SQL, JavaScript, HTML/CSS.
<b>Frameworks</b>	PyTorch, Scikit-learn, LangChain, LangGraph.
<b>Developer Tools</b>	Git, Linux, Docker, PostgreSQL, Redis.
<b>Languages</b>	English (IELTS 7.0), Vietnamese.

## REFERENCES

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**Prof. Dung D. Le**, Assistant Professor, VinUniversity, Vietnam  
Email: dung.ld@vinuni.edu.vn.  
Homepage: <https://andrew-dungle.github.io>

**Prof. Tung Nguyen-Dang**, Assistant Professor, VinUniversity, Vietnam.  
Email: tung.nd2@vinuni.edu.vn.  
Homepage: <https://vinuni.edu.vn/people/nguyen-dang-tung-phd/>

**Dr. Long Quoc Tran**, Senior Lecturer (eq. Assistant Professor), VNU University of Engineering and Technology, Vietnam  
Email: tqlong@vnu.edu.vn.  
Homepage: <https://scholar.google.com/citations?user=tnDavUYAAAAJ>