Truong Vu-Quang

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Personal Statement

Dedicated AI researcher with a strong foundation in computer science and a focus on developing cutting-edge solutions in computer vision, especially efficient object detection. Graduated top of my class, I aim to deepen my expertise in artificial intelligence, contributing to groundbreaking research and technological advancements.

Education

Hanoi University of Science and Technology (HUST) Hanoi, Vietnam
Bachelor of Computer Science, Talented Program. 2019 - 2023

- **CGPA:** 3.90/4.0. Graduated #1 in the program.
- **Thesis:** SPARTA-GEMSTONE: A two-phase approach for efficient node placement in 3D wireless sensor networks under Q-Coverage and Q-Connectivity constraints.

Experience

Mohamed bin Zayed University of Artificial Intelligence (MBZUAI) Remote
Visiting Researcher - Supervisor: Assist. Prof. Yutong Xie 11/2025 - Now

- Conducted research in Medical AI under the supervision of Assist. Prof. Yutong Xie.

Qualcomm AI Research Hanoi, Vietnam
AI Resident - Supervisor: Prof. Minh Hoai Nguyen 04/2025 - 06/2025

- Continued the work at VinAI on low-rank prompt adaptation for open-vocabulary object detection, resulting in one paper accepted at ICCV 2025 Workshop.

VinAI Research Hanoi, Vietnam
AI Resident - Supervisor: Prof. Minh Hoai Nguyen 02/2023 - 03/2025

- **Efficiency-preserving Scene-adaptive Object Detection:** Developed a framework for multi-camera video streams, achieving state-of-the-art precision-efficiency trade-offs (4.65 mAP improvement). Accepted for oral presentation at BMVC 2024.
- **Low-Rank Prompt Adaptation for Open-Vocabulary Object Detection:** Pioneered a framework that optimizes textual prompts, achieving state-of-the-art performance across five datasets with minimal annotation requirements.
- **Unidentified License Plate Detection:** Built a detection pipeline for obscured license plates, integrating OCR, and was awarded Best Applied Rotation Project in Q2 2024.

MSO Lab, HUST Hanoi, Vietnam
Member - Supervisor: Assoc. Prof. Thi Thanh Binh Huynh 10/2020 - Present

- Conducted research on target and area coverage problems in wireless sensor networks (WSNs) and mentored new lab members. Three papers accepted in *Journal of Network and Computer Applications* (Q1, IF 7.7).

FPT Software Hanoi, Vietnam
AI Engineer Intern 08/2022 - 02/2023

- Developed a chatbot using Rasa to assist the IT Helpdesk team, automating user inquiries and improving support response times.

Publications

Conference Proceedings

1. Z. Zhang*, **V. Q. Truong***, and M. Hoai, "Low-Rank Prompt Adaptation for Open-Vocabulary Object Detection," in *ICCV 2025 Workshop*.
2. Z. Zhang, **V. Q. Truong**, and M. Hoai, "Efficiency-preserving scene-adaptive object detection," in *35th British Machine Vision Conference 2024*.

Journal Articles

1. **Truong Q. Vu**, Minh T. Trinh, Hien Q. Ta, Hanh T. Nguyen, and Binh T T. Huynh, "STEAM: Securing the connections in wireless sensor networks with varying target priority," *Computer Networks*, vol. 277, p. 112024, 2026.
2. **Q. T. Vu**, T. M. Trinh, T. H. Nguyen, V. C. Trinh, T. T. B. Huynh, X. T. Nguyen, and C. P. Huynh, "SPARTA-GEMSTONE: A two-phase approach for efficient node placement in 3D WSNs under Q-Coverage and Q-Connectivity constraints," *Journal of Network and Computer Applications*, vol. 239, p. 104175, 2025.
3. **Q. T. Vu**, P. T. Nguyen, T. H. Nguyen, T. T. B. Huynh, V. C. Trinh, and M. Gidlund, "Striking the perfect balance: Multi-objective optimization for minimizing deployment cost and maximizing coverage with harmony search," *Journal of Network and Computer Applications*, vol. 232, p. 104006, 2024.
4. N. T. Hanh, H. T. T. Binh, **V. Q. Truong**, N. P. Tan, and H. C. Phap, "Node placement optimization under q-coverage and q-connectivity constraints in wireless sensor networks," *Journal of Network and Computer Applications*, vol. 212, p. 103578, 2023.

Awards and Achievements

Best Applied Rotation Project of Quarter 2, VinAI Research — 2024
Third prize, AI Hackathon: Face Analysis Challenge, Pixta Vietnam — 2024
2 times **Sumitomo Sponsor Scholarship**, HUST — 2023, 2020
Best Presentation Award for the graduation thesis in the Optimization committee, HUST — 2023
First prize, SoICT Hackathon, Tiki Track — 2023
Consolation Prize, SoICT Student Research Conference — 2022
3 times **Study Encouragement Scholarship**, HUST — 2022, 2021
Top 6 in National High School Exam with Math, Physics, and English combination — 2019

Certifications

IELTS Academic: 8.0 (Reading 9.0, Listening 8.5, Writing 7.0, Speaking 6.5), British Council — 2024

Skills

Technical: Java, Python, C/C++, SQL, LaTeX, MySQL, PostgreSQL, SQLite
Language: Proficient in English (reading, writing, speaking)
AI Expertise: Computer Vision
Others: Academic research, teamwork, presentation skills

References

1. **Minh Hoai Nguyen**, *Professor* — The University of Adelaide, Australia
Email: minhhoai.nguyen@adelaide.edu.au
2. **Thi Thanh Binh Huynh**, *Professor* — Hanoi University of Science and Technology, Vietnam
Email: binhht@soict.hust.edu.vn

*Equal contribution