

Nguyen Minh Quang

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Education

Ho Chi Minh City University of Foreign Languages - Information Technology (HUFLIT)

HCM, Vietnam

Bachelor in Information Technology, Major in Data Science.

TOEIC: 930/990.

04/2027

Awards

ROBOG 2024: 3rd Prize & Best Application Idea Award.

IT Got Talent 2025 Competition: Consolation Prize.

Bach Khoa Innovation 2025 Competition: Top 9 (U-I Category) & Top 20 (University Category)

The 2026 Conference on Applications of Technology, Automation and Civil Engineering: Best Paper Award.

Experience & Notable Projects

Nguyen Hue Walking Street, HCMC, Vietnam

Developer - Interactive Robot

- Implemented MediaPipe to enable real time human-robot interaction for tourists during the Tet holiday 2025.
- Attracted significant public attention more than 12.000 visitors per day, resulting in feature mentions across major national newspapers including [Thanh Nien](#), [Tuoi Tre](#), [Lao Dong](#).

01 Ly Thai To, [Water Drop Park](#), HCMC, Vietnam.

Project Leader - Offline Election Information Chatbot

- Developed an AI virtual assistant to provide information and answer public queries related to national elections for “*Học sinh, sinh viên Thành phố Hồ Chí trao niềm tin, gửi kì vọng*” community event.
- Contributed to the Text-to-SQL prompt engineering modules and output smoothing algorithms.
- AI/ML Stack: Qwen2.5-7B, Llama-cpp-python, ChromaDB, BAAI/bge-m3, BM25s, BAAI/bge-reranker-v2-m3.
- Infrastructure: FastAPI, Uvicorn, SSE (Server-Sent Events), Faster-Whisper (ASR), Web Speech API (TTS).

HUFLIT, HCMC, Vietnam

Project Leader - Automated Student Card Image Processing

- Built and deployed an image processing pipeline to handle and format thousands of student photos for the university's student ID cards.
- Technologies: Python, InsightFace (RetinaFace), PaddleOCR, BiRefNet, BiSeNet, Streamlit...

Research Experience & Publications

Accepted Papers

- **1st Author:** "Toward a Hybrid Efficient Edge-Host Smart Helmet System for Drowsiness Detection and Accident Verification using ESP32-S3." *The 5th International Conference on Sustainable Development in Civil, Urban and Transportation Engineering (CUTE 2026)*.
- **Corresponding-author:** "Real-Time Traffic Sign Detection for Edge Devices: A Mixed-Precision NMS-Free Approach." *The 2026 Conference on Applications of Technology, Automation and Civil Engineering (ATAC 2026)*.
- **Co-author:** "An Android-Based Edge Device for Footwear Defect Inspection Toward a Portable yet Powerful Approach." *The 2026 International Conference on Machine Learning and Computational Intelligence (MLCI 2026)*.
- **Co-author:** "A Multi-Modal Approach for Hydrogen Leakage Monitoring based on Thermal Vision." *2026 International Conference on Machine Learning and Computational Intelligence (MLCI 2026)*.

Tinh Vi Club (HUFLIT Academic IT Research Group), HCMC, Vietnam

Founder & Leader

- Founded and managed a research academic club, growing the community to approximately 40 members including university students and lecturers.
- Collaborated with company and external research groups to deploy AI applications.

Skills & Interests

Programming: Python, C#, SQL.

AI & Machine Learning: YOLO Series, MobileViT, RAG, CNN, Qwen, NMS Free Architectures.

Edge Optimization & Hardware: TFLite, TensorRT, ONNX, Model Quantization (INT8/FP16), ESP32, Raspberry Pi.

Libraries & Tools: Vector Databases, PyTorch, Mediapipe, OpenCV, Git/GitHub, Docker, Linux, Pandas, NumPy.