

THANH VAN TRONG TRAN

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EXPERIENCE

AI Resident & AI Research Engineer FPT Software — <i>largest IT services company in Southeast Asia</i>	Aug 2023 - Present <i>Hanoi, Vietnam</i>
<ul style="list-style-type: none">Conducted research in multimodal AI, speech/audio AI, and generative models, with publications at ICASSP 2025 and Interspeech 2025.Conducted research on improving protein characteristics on sequence-level, leading to a series of three accepted papers at two Q1 journals (IF 12 and 6.2) and one A* conference.Advisors: Assistant Prof. Truong-Son Hy and Dr. Van Nguyen.	
Student Researcher Institute for Artificial Intelligence	Sep 2022 - May 2023 <i>VNU University of Engineering and Technology, Hanoi</i>
<ul style="list-style-type: none">Built and made open-source the error analysis tool for multi-target multi-camera tracking system (GitHub).Developed graph neural network-based solution for re-identification problem in multi-target multi-camera tracking system.Advisor: Dr. Long Quoc Tran.	
Speech Processing Intern VinBigData — <i>Conversational AI solutions</i> (now VinSmart Future)	Oct 2021 - Nov 2022 <i>Hanoi, Vietnam</i>
<ul style="list-style-type: none">Designed a telephony-speech augmentation pipeline that reduced ASR WER by 25% on production benchmarks.Developed a neural decoder that outperforms vanilla beam search by 10%.Delivered a low-latency streaming ASR ($\approx 70\text{ms}$ end-to-end, 12% WER on in-house dataset) for automotive deployment.Maintained and developed company's in-house speech recognition framework.	

EDUCATION

Bachelor of Computer Science , VNU University of Engineering and Technology <i>Top 10% of the entire graduating cohort — GPA: 3.71/4.0</i>	Aug 2019 - Jun 2023
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PUBLICATIONS

(*) Equal contribution

Conference Papers

Speech Reconstruction from Silent Videos via Acoustic-Semantic Decomposed Modeling | [Link](#)
Long-Khanh Pham, Thanh V. T. Tran, Minh-Tan Pham, Van Nguyen.
Interspeech 2025.

Effective Context Modeling Framework for Emotion Recognition in Conversations | [Link](#)
Cuong Tran Van*, Thanh V. T. Tran*, Van Nguyen, Truong Son Hy.
ICASSP 2025.

GROOT: Effective Design of Biological Sequences with Limited Experimental Data | [Link](#)
Thanh V. T. Tran*, Nhat Khang Ngo*, Viet Anh Nguyen, Truong Son Hy.
KDD 2025.

Journal Papers

Latent-based Directed Evolution accelerated by Gradient Ascent for Protein Sequence Design | [Link](#)
Thanh V. T. Tran, Nhat Khang Ngo, Viet Thanh Duy Nguyen, Truong Son Hy.
Machine Learning: Science and Technology.

Protein Design by Directed Evolution guided by Large Language Models | [Link](#)
Thanh V. T. Tran, Truong Son Hy.
IEEE Transactions on Evolutionary Computation.

Under Submission

Precise Video-to-Audio Generation with Cross-Modal Alignment in Latent Space

Thanh V. T. Tran, Ngoc-Son Nguyen, Luong Tran, Long-Khanh Pham, Paarth Neekhara, Shehzeen Hussain, Van Nguyen.

DiFlowDubber: Discrete Flow Matching for Automated Video Dubbing via Cross-Modal Alignment and Synchronization

Ngoc-Son Nguyen, Thanh V. T. Tran, Jeongsoo Choi, Hieu-Nghia Huynh-Nguyen, Truong-Son Hy, Van Nguyen.

DiFlow-TTS: Compact and Low-Latency Zero-Shot Text-to-Speech with Factorized Discrete Flow Matching

Ngoc-Son Nguyen, Thanh V. T. Tran, Hieu-Nghia Huynh-Nguyen, Truong Son Hy, Van Nguyen.

AgentSound: A LLM-Driven Multi-Agent Framework for Augmenting Sounds with Semantic Context Guidance

Van Truong Hoang, Viet Pham, Thanh V. T. Tran, Van Nguyen, Harry Nguyen.

PRESENTATIONS

Oral paper presentation, KDD 2025

Toronto, Canada

ACHIEVEMENTS

- Top 2 in Automatic Speech Recognition - Task 1 of VLSP 2022 competition ([Certificate](#)).
- Top 3 in Automatic Speech Recognition - Task 2 of VLSP 2022 competition ([Certificate](#)).
- Third prize in Scientific Research Contest for College Students ([Certificate](#)).
- UET Merit Scholarship (8 semesters) - VNU University of Engineering and Technology.

TECHNICAL SKILLS

Programming	Python, Bash, C/C++, L ^A T _E X, Java, SQL, JavaScript, HTML/CSS.
Libraries	PyTorch, TensorFlow, Scikit-learn.
Developer Tools	Jupyter, Git, Linux, Docker, MongoDB.

LANGUAGES

Vietnamese	Native
English	Advanced (IELTS 7.5)

REFERENCES

- Assistant Prof. [Truong-Son Hy](#) - The University of Alabama at Birmingham, United States.
- Dr. [Van Nguyen](#) - FPT Software, United States.
- Dr. [Long Quoc Tran](#) - Institute for Artificial Intelligence, UET, Vietnam.