Thien An NGUYEN

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Introduction

I am a graduate student pursuing MSc degrees in Data Science at USTH and INP Toulouse. I am also working at eUp Group as an AI Engineer. I love to do research and am passionate about Generative Models, Audio/Speech Models, NLP, Computational Creativity, and On-device Models. I aim to contribute meaningfully to the academic community while furthering my intellectual growth and professional development.

Education

University of Science and Technology of Hanoi, MSc in Data Mining for IoT — Sept 2024 – Sept 2026 (Expected graduation date)

- **GPA:** 15.04/20 as for now (French grading systems) ~3.57/4.0 (US grading systems conversion)
- **Coursework:** Machine Learning, Deep Learning, Modeling Techniques, Information Systems, Security and Ethics for Data, Systems Architecture, HPC Programming, etc.

INP Toulouse, MSc in Data Science (Double Degree program with USTH) — Sept 2024 – Sept 2026 (Expected graduation date)

University of Science and Technology of Hanoi, BSc in ICT — Sept 2021 – Aug 2024

- **GPA:** 16.24/20 (French grading systems) ~3.61/4.0 (US grading systems conversion)
- **Coursework:** Machine Learning, Deep Learning, Web Application Development, Mobile Application Development, Digital Signals Processing, Natural Language Processing, Distributed Systems, Cryptography, Database, etc.

Publications

Structure-Aware Multi-Teacher Distillation via Reinforcement Learning for Few-Shot Open-Set Keyword Spotting — Submitted to ICASSP 2026
Tung X. Nguyen[†], **Thien-An Nguyen**[†], Hoang-Tung Tran
PDF
[†]Equal contribution

Experience

Research Assistant, ICT Lab - University of Science and Technology of Hanoi — Feb 2025 – Present

- Working on on-device open-set KWS.
- Implemented distillation from large model for better on-device KWS model.
- Implemented RL for multi-teacher distillation.

AI Engineer, eUp Group (Full-time) — Jan 2025 – Present

- Used RAG and text embeddings for personalized dictionary lookup. (Mazii)
- Developed AI for explaining Japanese questions in multiple languages. (Migii-JLPT)
- Developed AI for generating Japanese exercises which match difficulty levels. (Migii-JLPT)
- Working on Japanese speaking evaluation using both speech and transcript. (JOPT)
- Researching on on-device translation models from speech to speech.
- Used frameworks such as n8n to build Agent for Japanese data labeling.

Teaching Assistant, University of Science and Technology of Hanoi (Part-time) — Oct 2024 – Mar 2025

- Teaching Course(s): Signals and Systems, NLP.
- Prepare exercises.
- Help students understand lectures.

Generative AI Developer, Amela Technology (Full-time) Nov 2024 – Jan 2025

- Researched about OCR for Japanese handwriting text.
- Researched about Japanese handwriting text generation.
- Learned about VLM, RAG, and Diffusion Models.

Research Intern, L3i Lab - La Rochelle University – La Rochelle, France. (Full-time) Apr 2024 – Jul 2024

- Researched on Computational Creativity in Music Generation.
- Proposed methods for handling Music Semantics over notes, dynamics, and time. (Which Note, at which Velocity, and when is the Time to play the note)
- Processed data from MIDI files to create tokens for Symbolic Music.
- Designed models for Symbolic Music Generation using Transformer.
- Utilized Relative-Attention mechanism to improve long dependencies learning.
- Evaluated objectively the performance of Symbolic Music Generation models assistive and autonomously.
- Proposed a method to evaluate the performance of the models subjectively.

Projects

DaiJazz Apr 2024 - Jul 2024

Experimented and built an AI model to generate music autonomously and assistive.

- Members: 5.
- Position: Researcher, Main Developer.
- Tasks: Process MIDI data from MIDI Files, find the best text representation, build a tokenizer for the Transformer-based model, and build Transformer-based sequential models to handle different types of tokens. Experiment with different models and give evaluations.
- Tools Used: Python, PyTorch, json, MIDI Files, Transformer, Relative Transformer, GPT-2, etc.

Indoor Assistant for Blind People Nov 2023 - Jan 2024

The project aimed to develop an affordable system utilizing technology and artificial intelligence to assist people with vision impairment in navigating inside their houses. Additionally, it includes a feature to describe the surrounding scenery to aid them in navigating around objects.

- Members: 6.
- Position: Developer.
- Tasks: Run inference and integrate the models into a system.
- Tools Used: yolov8, MiDaS, Python, PyTorch, etc.

USTH Type-1 Project Feb 2024 - Aug 2024

Create an AI model for Vietnamese Keyword Spotting. Develop a model for few-shot learning and deploy it on edge devices.

- Members: 7.
- Position: Developer, Tester.
- Tasks: Train and test the AI model.
- Tools Used: Python, AIoT AutoCar II, NaoV6, Keyword Transformer, yaml, etc.

Technologies

Programming Languages: Python, C/C++, Java, JS, PHP, HTML/CSS.

Frameworks: PyTorch, TensorFlow, Cuda jit, etc.

Technologies: Git, shell, Jupyter Notebook, GPU Clusters, etc.

Operating Systems: MacOS, Linux, Windows.

Additional Skills

Languages: Fluent in English and Vietnamese; German at B1 level; French at A2 level.

Soft skills: Self-study, teamwork, problem-solving skills

Musically: Bass player for NewCreation Band. Featured on VTV.

References

Hoang Tung Tran, PhD - Deputy Director
Department of Information and Communication Technology, University of Science and Technology of Hanoi.

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Additional: Provide when needed.