

Thien An NGUYEN

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Introduction

I am a graduate student pursuing a Master's degree. 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. Moreover, I also want to create different software that can benefit the public.

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.

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

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Giang Son Tran, Assoc. Prof. - Director

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Additional: Provide when needed.