

Pham Ngoc Quan

ngocquanofficial@gmail.com • 085-731-8283 • [LinkedIn](#) • [GitHub](#)

EDUCATION

Hanoi University of Science and Technology | Hanoi, Vietnam

Sep 2021 - Present

- **Major:** B.S. in Data Science | **GPA:** 3.53/4.0
- **Relevant Courses:** Data Structures & Algorithms, Data Science, Natural Language Processing, Computer Vision

Thai Binh Gifted High School | Thai Binh, Vietnam

Sep 2018 - Sep 2021

- **Major:** Mathematics

PUBLICATIONS

A robust pitch-fusion model for speech emotion recognition in tonal languages (ICASSP 2024)

- Pham Viet Thanh*, Ngo Thi Thu Huyen*, Pham Ngoc Quan, Nguyen Thi Thu Trang[†]

RESEARCH EXPERIENCE

Speech Emotion Recognition | NLP Laboratory (BKAI) | Hanoi, Vietnam

Researcher/Student Assistance

May 2023 - Present

- Implemented audio-visual pipeline including video crawling, face tracking, active speaker detection, face clustering, and data annotation to construct ViSEC - the first public Vietnamese emotional speech dataset.
- Implemented a trustworthy Pseudo-Labeling framework for Speech Emotion Recognition in low-resource languages such as Vietnamese, achieved SOTA results for SER task with 75% weighted accuracy.
- Investigated enhanced architectures of attention mechanisms to optimize Speech Emotion Recognition, including Area Attention, Focus and Calibration Attention, Context Pooling.

Vietnamese Spoofing-Aware Speaker Verification | NLP Laboratory (BKAI) | Hanoi, Vietnam

Researcher/Student Assistance

Sep 2023 - December 2023

- Developed an integrated Automatic Speaker Verification (ASV) and Countermeasure (CM) system, utilizing advanced models (ECAPA-TDNN, RawNet3 for ASV, AASIST, S2pecNet for CM).
- Introduced a novel fusion layer using Catboost to enhance spoofing detection capabilities in Vietnamese speech.
- Successfully achieved third place in both public and private test sets at VLSP 2023 - VSASV Challenge.

PERSONAL PROJECT

The book “89 Functional Equation Problems”: Compiled functional equation problems, a common topic in the International Mathematical Olympiad, and is currently used by the Thai Binh Mathematics Team.

DB-Tool: Managed relational database dependencies, incorporating algorithms for schema normalization and optimization calculations.

English-Vietnamese Machine Translation: Developed a machine translation model based on the pretrained ViT5, fine-tuned with the MTET and PhoMT datasets.

Football Player Price Prediction: Implemented a data crawling system for the Transfermarkt website using BeautifulSoup and Selenium, performed data analyses, identified important features, and utilized machine learning models for predicting player market values.

Sorting Algorithm Visualize Program: Implemented interactive visualizations of different sorting algorithms using JavaFX.

Vietnamese Speech Enhancement: Employed the CMGAN model and enhanced its performance by fine-tuning with a 10-hour clean Vietnamese speech dataset.

ACHIEVEMENTS

Third Prize for Vietnam Mathematical Olympiad 2021

- Issued by Ministry of Education and Training

First Prize for National Startup Contest for Students SV.STARTUP 2023

- Issued by Ministry of Education and Training

Second Prize for SOICT Hackathon 2023 (AI-Powered BFIS track)

- Issued by Hanoi University of Science and Technology and BKAI

TECHNICAL SKILLS

Programming Languages: Python (Advanced), Java (Advanced), C++

Frameworks: Pytorch, OpenCV, Huggingface, Scikit Learn, Transformers