Nhan Tri-Do
Research Engineer

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Education

Advanced Program in Computer Science, *VNUHCM - University of Science*

GPA: 3.83/4.0

Topic: Speech Synthesis, Voice Conversion, Voice Cloning

Experience

Vingroup Big Data Institute - Vingroup　　　　　　　　　　　　Oct 2021 - Present

AI Engineer　　　　　　　　　　　　　　　　　　　　　　　　　Hanoi, Vietnam

- *Voice Assistant for Electric Vehicles*: deploy speech synthesis to Edge Devices, and focus on optimizing a universal speech synthesis model with multi-speaker.
- *Smart Speakers*: research and develop a Voice Cloning feature that can mimic voices with just a few voice samples using speaker embedding.

VinAI Research Institute - Vingroup　　　　　　　　　　　　Dec 2020 - Sep 2021

Resident Engineer　　　　　　　　　　　　　　　　　　　　　Hanoi, Vietnam

- Voice Control for Electric Vehicles - adapt SOTA Speech Synthesis Model for Vietnamese: Mel-Generator (Tacotron2, Fastspeech2, GlowTTS), Vocoder(Multiband-Melgan, Hifigan).
- SpeechMT - Deploy real-time voice-based machine translation, speech processing plays the role of I/O of the system.
- Speech-based QA Car Manual - Deploy lightweight system interacting with users via speech commands.

KMS Technology - Outsourcing and Consulting Enterprise　　　　June 2020 – Sep 2020

Software Engineer　　　　　　　　　　　　　　　　　　Ho Chi Minh city, Vietnam

- Involved in R&D team with core AI projects about Question Answering for chatbot platform.
- Developed Web API to handle multiple requests in AI product with limited resources.

Scooter Saigon Tour – Tourism Startup　　　　　　　　　　　Jan 2014 – Aug 2017

SEO - Developer　　　　　　　　　　　　　　　　　　　Ho Chi Minh city, Vietnam

- Develop the website with Wordpress, setup PHP backend and Payment system with VTCpay
- Search Engine Optimization (SEO) with content and backlink

Freelance Side Jobs　　　　　　　　　　　　　　　　　　　　　　　　　.

- Hum to Song - Lyric alignment
- Voice-Preserving Speech Machine Translation
- Speech Enhancement and Noise Reduction
- Sound Event classification
- Music Emotions and Themes classification
- Music Voice Conversion
- Speaker verification - Anti-spoofing
- Synthetic Speech Attribution

Lab Research

Speech and Language laboratory - Nanyang Technological University   Sep 2022 – Present

Internship   Remote Singapore

- Participating in government project on sound event classification for Singapore technologies.

Artificial Intelligence lab - University of Science   Feb 2019 – Sep 2021

Collaborator   Ho Chi Minh city, Vietnam

- Assistant at VNsigma – class for python beginner Supported by American Consulate.
- Organization board ERC2019 – Emotion Recognition Challenge.
- Data mining and collecting project to build Vietnamese speech corpus.
- Research in Speech Synthesis for Vietnamese, Text Normalization and Phonology.

Robotics and IoT lab - University of Science   May 2019 – Sep 2021

Teacher assistant   Ho Chi Minh city, Vietnam

- Teacher for EV3 Mindstorm and Coach for FLL and WRO competition.

Computational linguistics center - University of Science   April 2019 – Sep 2019

Teacher assistant   Ho Chi Minh city, Vietnam

- Teacher Assistant for Faculty of English linguistics, USSH in SDL Trados Studio - computer-assisted translation software.

Publications

Voice Conversion - Voice Cloning

- Thesis: DeepSpeechVC: Voice Cloning Framework with Speech Synthesis and Voice Conversion - Experiment with Speech2Speech techniques to make voice conversion from a small sample of the target speakers
  Tri-Nhan Do, Minh-Tri Nguyen under the advice of Prof. Vu Hai Quan, Msc. Xuan-Nam Cao

Speech Synthesis

- Journal: FastSpeechStyle: Fast, Emotion Controllable and High-Quality Speech Synthesis at The International Journal of Asian Language Processing
  Van Thinh Nguyen, **Tri-Nhan Do**, Hung-Cuong Pham, Tuan Vu Ho, Ngoc-Minh-Khanh Nguyen, Dang-Khoa Mac

- Paper: Vietnamese Speech-based Question Answering over Car Manuals - Data-Centric AI Workshop at 35th Conference on Neural Information Processing Systems (DCAI@NeurIPS2021)
  Tin Duy Vo, Manh Tien Luong, Duong Minh Le, Hieu Minh Tran, **Nhan Tri Do**, Tuan-Duy Hien Nguyen, Hung Hai Bui, Dat Quoc Nguyen, Dinh Quoc Phung

- Paper: Vietnamese Speech Synthesis with End-to-End Model and Text Normalization - 2020 7th NAFOSTED
  Do Tri Nhan, Nguyen Minh Tri, Cao Xuan Nam

- Pypi Package Vinorm: Vietnamese Normalization with three version C++, NDK for Android and PyPi

- Pypi Package Viphoneme: Phonetization, Convert Vietnamese Grapheme to IPA

Emotion Classification

- Paper: Emotion Classification Using Wavenet Features with SpecAugment and EfficientNet - MediaEval'20, December 14-15 2020, France
  Tri-Nhan Do, Minh-Tri Nguyen, Hai-Dang Nguyen, Minh-Triet Tran, Xuan-Nam Cao

Certifications and Awards

- First Price at VLSP TTS: Emotional speech synthesis   2022
- Outstanding Student Award in the Field of Artificial Intelligence Ho Chi Minh City   2021
- Excellent Thesis - Science and Technology Student Award   2021
- First Prize Science-A-Thon Award in 9th Vietnam Summer School of Science   2022
- Runner Up KMS Hackathon   2020
- FPT Scholarship for Final Round in Code War Competition   2019
- Final Round Samsung Collegiate Programming Cup   2018
- ACM-ICPC Vietnam National Programming Contest: rank 33   2018
- 7th-place / 23 teams at The IEEE Signal Processing Society's Signal Processing Cup   2022