Jiyang Tang

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EDUCATION

Carnegie Mellon University (CMU) Pittsburgh, PA
Master of Science in Intelligent Information Systems May 2024

Duke Kunshan University (DKU, joint program with Duke University) Kunshan, China
Bachelor of Science in Data Science by Duke Kunshan University May 2022
Bachelor of Science in Interdisciplinary Studies (Data Science) by Duke University May 2022

EXPERIENCE

WAVLab at CMU Language Technologies Institute Pittsburgh, PA
Research Assistant September 2022 – Present

- Created Espnet2's speech recognition training recipe of MAGICDATA mandarin speech corpus

DKU Speech and Multimodal Intelligent Information Processing Lab May 2020 - May 2022
Research Assistant

- Constructed a Computer-Aided Pronunciation Training system that detects Mandarin language learners' mispronunciation and gives visual and audio feedback, leveraging deep learning and speech recognition
- Built a server backend running Goodness-of-Pronunciation algorithms, using Python, Kaldi, and C++
- Programmed and published a mobile app (on iOS and Android devices) using Flutter that allows users to record pronunciation and view evaluation feedback
- Deployed the system to support 30+ international students' daily homework and in-class activities for a semester
- Published End-to-End Mandarin Tone Classification with Short Term Context Information as the primary author during APSIPA ASC 2021

Xiaomi Beijing, China
Software Engineer Intern May 2021 – January 2022

- Designed and implemented a novel end-to-end Computer-Aided Pronunciation Training (CAPT) system, using Espnet and PyTorch
- Investigated the performance and production value of applying multiple fault detection methods and several scoring backends to the CAPT system
- Devised new strategies to train models on small and severely imbalanced datasets, including a data augmentation method and a self-supervised training pipeline
- Overhauled Xiaomi's production CAPT system, which has been deployed in all Mi Kids Watch series, using C++ and Kaldi, and expanded its language support to include Mandarin Chinese

iFLYTEK Chengdu, China
Software Engineer Intern July 2020 - August 2020

- Designed and constructed software tools used by the project team of Xunfei Yingyutong, an AI English learning pad, such as automatic price monitor and network traffic diagnostic tools

SKILLS

Programming languages: C++, Python, Java
Frameworks/toolkits: PyTorch, Espnet, Kaldi, FastAPI, Flutter, Unity Engine
Cluster software systems: SGE, SLURM
Others: Linux environment, Git-based development workflow