Jiyang Tang

jiyangta@andrew.cmu.edu · tjysdsg.github.io

EDUCATION

Carnegie Mellon University Aug 2022 to Present
Master of Science in Intelligent Information Systems

Duke Kunshan University/Duke University Aug 2018 to May 2022
Bachelor of Science in Data Science (by Duke Kunshan)
Bachelor of Science in Interdisciplinary Studies (Data Science, by Duke)

- Cumulative GPA: 3.61/4.0; Major GPA: 3.70/4.0
- Research Assistant at DKU Speech and Multimodal Intelligent Information Processing (SMIIP) Lab, supervised by Professor Ming Li
- Honors and Awards:
  - Dii (DKU iNNOVATION iNCUBATOR) 2020 Batch Funding
  - Summer Research Program Funding
  - Undergraduate Entrance Scholarship (merit-based)

PUBLICATION

End-to-End Mandarin Tone Classification with Short Term Context Information, accepted by APSIPA ASC 2021, primary author

RESEARCH

Computer-Aided Pronunciation Training (CAPT) May 2020 to May 2022
A CAPT system uses deep learning to detect a user's mispronunciation and automatically gives feedback.

- Constructed a CAPT system consisting of a server backend and a mobile app to help international students at DKU learn Mandarin
- Wrote a paper about Mandarin Chinese tone classification, see **PUBLICATION**
- Funded by DKU Summer Research Program in 2020
- Also the topic of my signature work and the research focus during my internship at Xiaomi (see **INTERNSHIP**)

INTERNSHIP

Xiaomi Inc. May 2021 to Jan 2022
Research Assistant Intern Beijing, China

- Improved existing CAPT system's performance using end-to-end speech recognition and unsupervised speech processing
- Extended Xiaomi's existing CAPT system to support Mandarin
- Supervised by Dr. Yujun Wang, director of Xiaomi's speech technology department

EXTRACURRICULAR ACTIVITIES

Presento Team, Dii (DKU iNNOVATION iNCUBATOR) 2020 Batch Dec 2020 to Aug 2021
Core Technical Member

Our team built an AI communication coaching app that can provide an intelligent and personalized evaluation and feedback to improve users' communication skills. We developed a multi-modal method utilizing the power of facial emotion detection, speech evaluation, paralinguistics, NLP, and pose estimation

- Implemented speech quality evaluation (including fluency, vocabulary, and intelligibility) and body language detection functionalities
- Reported in Dii news: https://mp.weixin.qq.com/s/EGfpfsR8mtLrhVbkPEHKGw

TECHNICAL SKILLS

Besides speech processing, I have a wide range of skills:

- C++, Java, Python, Linux, and deep learning toolkits (PyTorch, Espnet, Kaldi)
- SGE, SLURM
- Game engines (Unity, Godot) and mobile development (Android/iOS development and Flutter framework)
- Database related technologies (SQL, PostgreSQL, SQLAlchemy, MongoDB)
- Git-based software development workflow, contributed to open-source projects like Espnet and Wenet

ADDITIONAL INFORMATION

- Languages: Chinese, English