TING-LE LI

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EDUCATION

Tiangong University **Tianjin, China**
BEng in Computer Science (Honors Program of Artificial Intelligence) *Sep. 2016 - Present*
Overall GPA: 3.71/4.00 (Top 5%) Major GPA: 3.93/4.00

PUBLICATION

[1] Qingjian Lin, **Tingle Li**, Lin Yang, Junjie Wang, and Ming Li. " Optimal Mapping Loss: A Faster Loss for End-to-End Speaker Diarization." Speaker Odyssey 2020.

[2] **Tingle Li**, Jiawei Chen, Haowen Hou, and Ming Li. " Sams-Net: A Sliced Attention-based Neural Network for Music Source Separation." Interspeech 2020. (to be submitted)

[3] **Tingle Li**, Qingjian Lin, Yuanyuan Bao, and Ming Li. " Atss-Net: Target Speaker Separation via Attention-based Neural Network." Interspeech 2020. (to be submitted)

TECHNICAL STRENGTHS

Programing Language	Python, Java, C++, Shell
Programing Framework	PyTorch, TensorFlow, Keras and a little Kaldi
GitHub	https://github.com/Tinglok

RESEARCH INTERESTS

Source Separation, Speech Enhancement, Music Information Retrieval, Multimodal Learning

WORK EXPERIENCES

Speech and Multimodal Intelligent Information Processing (SMIIP) Lab **Suzhou**
Research Intern *Jul. 2019 - Present*

- Advised by Prof. Ming Li, I do some research on the utterance-level speaker and language recognition based on the deep neural network;
- Trying to do some research about speech front-end processing, including but not limiting to separation, enhancement, and reverberation.

Samsung Research Institute China (SRC-B) **Beijing**
Research Intern *Jan. 2020 - Mar. 2020*

- Working with researchers from Samsung Speech Lab, I built a joint speech enhancement and separation system, which was prepared for Bixby;
- First, we input the speaker utterance to get the speaker embedding; then, we can input it together with the mixed utterance to this system. Finally, we can get the nearly clean utterance no matter what the background noise is.

Tianjin Key Laboratory of Autonomous Intelligence Technology and Systems **Tianjin**
Student Research Assistant *Sep. 2018 - Jun. 2019*

- Advised by Prof. Rize Jin and Dr. Weitao Yuan, I mastered Deep Learning-based method for speech processing, especially in music information retrieval;

- Learning some basic knowledge about signal processing, such as Short-time Fourier transform (STFT), GMM-HMM, Fbank and MFCC, etc.

RESEARCH PROJECTS

Target Speaker Separation for Overlap Detection **Suzhou**
Research Assistant *Oct. 2019 - Present*

- Given a referenced utterance of the target speaker, and a mixed utterance containing the target speaker, this system aims at filtering the target speaker's voice from the mixed utterance.
- Trying to modify the LSTM layer with the attention mechanism, which is used for combined the target speaker embedding and the mixed spectrogram. Online samples are here.

A Sliced Attention-based Neural Network for Music Source Separation **Suzhou**
Research Assistant *Sep. 2019 - Present*

- We proposed a Sliced Attention-based neural network (Sams-Net) at the spectrogram domain for music source separation task, which enabled feature interactions from the magnitude spectrogram contribute differently to separation;
- Our model achieved the state-of-the-art performance when it comes to the SDR metric, although it contained fewer parameters compared with the baselines. It is expected to be submitted to Interspeech 2020 (as the first author) and now can be seen at arXiv.

Singing Voice Separation for Singer Verification **Shanghai**
Research Assistant *Sep. 2019 - Oct. 2019*

- Using the separation system to separate vocals and accompaniments from musical signals, which was used for Speaker Recognition system, so that when different people sing the same song at the same time, the number of singers can be roughly identified (about 99.1% Accuracy);
- This technique was used as the third party duplicate checking technique for Guinness Records of the CCTV National Day Celebration Program, and the news can be found at here.

SELECTED HONORS & AWARDS

Three years of Dean's List, *2016 - 2019*
Three years of Merit Scholarship, *2016 - 2019*
Third Prize of the "Lan-Qiao" Cup National Selection Competition, *2016 - 2017*
First Prize of the China Students Service Outsourcing Innovation and Entrepreneurship Competition (7.9% of all), *2018 - 2019*

TEACHING EXPERIENCE

- Introduction to Machine Learning (TA) [Tutorial][Assignment] *Fall 2019*