

TING-LE LI

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Homepage: <https://tinglok.netlify.com>

EDUCATION

Tiangong University

BEng in Computer Science (Honors Program of Artificial Intelligence)

Overall GPA: 3.71/4.00 (Top 5%) Major GPA: 3.93/4.00

Tianjin, China

Sep. 2016 - Present

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)

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, Speaker Recognition, Music Information Retrieval

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 noise reduction 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 the noise reduction system. Finally, we can get clean utterance under the surrounding noise like songs, accompaniments, and other speakers' voices.

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 Extraction for Overlap Detection

Suzhou

Research Assistant

Oct. 2019 - Present

- Studying a system to separate the target speaker's utterance from the mixed utterance, that is, given two inputs into the system: the embedding vector from the target speaker, and the spectrogram of the mixed audio, then output the separated audio from the target speaker;
- Trying to modify the LSTM layer with attention mechanism, which is used for combined the target speaker embedding and the mixed spectrogram.

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