MENG GE

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Education Background

Tianjin University (TJU), Tianjin, China **09/2017 - Now**
Ph.D. in Applied Computer Technology Supervisor: Longbiao Wang

Tianjin University (TJU), Tianjin, China **09/2015 - 06/2017**
M.E. in Software Engineering Supervisor: Di Jin

Tianjin Polytechnic University (TJPU), Tianjin, China **09/2011 - 06/2015**
B.E. in Software Engineering GPA: 90.33/100 Ranking: Top3
B.S. in Public Management (double major)

Publications

- **Meng Ge**, Chenglin Xu, Longbiao Wang, Eng Siong Chng, Jianwu Dang, Haizhou Li, "SpEx+: A Complete Time Domain Speaker Extraction Network", in Proc. ISCA Interspeech, Oct. 2020, Accepted.
- Hao Shi, Longbiao Wang, Sheng Li, Chenchen Ding, **Meng Ge**, Nan Li, Jianwu Dang, Hiroshi Seki, "Singing Voice Extraction with Attention based Spectrograms Fusion", in Proc. ISCA Interspeech, Oct. 2020, Accepted.
- Hao Shi, Longbiao Wang, **Meng Ge**, Sheng Li, Jianwu Dang, "Spectrograms Fusion with Minimum Difference Masks Estimation for Monaural Speech Dereverberation", in Proc. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), May. 2020.
- Nan Li, **Meng Ge**, Longbiao Wang, Jianwu Dang, "A Fast Convolutional Self-attention Based Speech Dereverberation Method for Robust Speech Recognition", in Proc. ICONIP, Dec. 2019.
- **Meng Ge**, Longbiao Wang, Nan Li, Hao Shi, Jianwu Dang, Xiangang Li, "Environment-dependent Attention-driven Recurrent Convolutional NeuralNetwork for Robust Speech Enhancement", in Proc. ISCA Interspeech, Sep. 2019.
- **Meng Ge**, Longbiao Wang, Seiichi Nakagawa, Yuta Kawakami, Jianwu Dang, Xiangang Li, "Pitch Synchronized Relative Phase with Peak Error Detection For Noise-robust Speaker Recognition", in Proc. ISCSLP, Nov. 2018.
- Dongbo Li, Longbiao Wang, Jianwu Dang, **Meng Ge**, Haotian Guan, "Distant-talking Speech Recognition Based on Multi-objective Learning Using Phase and Magnitude-based Feature", in Proc. ISCSLP, Nov. 2018.
- Di Jin, **Meng Ge**, Liang Yang, Dongxiao He, Longbiao Wang, Weixiong Zhang, "Integrative Network Embedding via Deep Joint Reconstruction", in Proc. IJCAI, July. 2018.
- Di Jin, **Meng Ge**, Zhixuan Li, Wenhuan Lu, Dongxiao He, Francoise Fogelman-Soulie, "Using Deep Learning for Community Discovery in Social Networks", in Proc. ICTAI, Nov. 2017.
- Liang Yang, **Meng Ge**, Di Jin, Dongxiao He, Huazhu Fu, Jing Wang, Xiaochun Cao, "Exploring the Roles of Cannot-link Constraint in Community Detection via Multi-variance Mixed Gaussian Generative Model", in PloS One, July. 2017.

Research Experience

Research Assistant, National University of Singapore (NUS) **04/2020 - Now**
Research on Target Speech Separation and Extraction via Deep Learning in Multi-talker Conditions

- **Research Purpose:** To separate target speech signal from background interference in multi-talker conditions, and to improve the quality and intelligibility of target speech signal for speech applications.
- Proposed a complete time-domain speaker extraction approach to extract target speech signal, named SpEx+
- Extended the time-domain speaker extraction approach into overlapped multi-talker speaker verification task

Research Assistant, Nanyang Technological University (NTU) **10/2019 - 04/2020**
Research on Speech Enhancement and Separation for Speech Recognition

- **Research Purpose:** To depress the background interference in low-SNR conditions, and to reconstruct high-quality target speech signal for improving speech recognition performance.
- Formulation and implementation of speech enhancement systems for RAST and VB datasets in MASION project
- Researched on multi-channel speech separation using frequency-based speaker extraction and MVDR beamforming
- Built a complete speech enhancement repository in https://github.com/nanahou/Awesome-Speech-Enhancement
- Summarized a speech separation repository in https://github.com/gemengtju/Tutorial_Separation

Machine Learning Engineer, AI Lab of Didi Chuxing Company (DiDi) **09/2018 - 05/2019**
Research on Speech Separation and Drunk Detection in Car Environment

- **Research Purpose:** 1) To reduce noise and separate speech recordings in car for helping customer service staff better understand user intent; 2) To reduce in-car conflict probability using intoxication detection based on speech.
- Simulated training datasets using clean speech recordings, recorded car environment and synthetic audios
- Used the frequency-based PIT method to extracted target speech based on simulated dataset and real recordings
- Proposed a novel order-aware pairwise intoxication detection approach to detect the speaker state of passengers before order acceptance using speech recordings.

Certifications & Awards

- ***Oracle Certified Professional (OCP) - Oracle 10g Database Administrator,*** *Oracle*
- ***Oracle Database 10g Administrator Certified Associate (OCA),*** *Oracle*
- ***Outstanding Student Scholarship Award,*** *Tianjin University*
- ***First-Class Scholarship Award,*** *Tianjin University*
- ***Outstanding Youth Nomination Award,*** *Tianjin University*
- ***Outstanding Graduate Student Award,*** *Tianjin Polytechnic University*