Yang, Mu

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EDUCATION

- **Texas A&M University** (College Station, U.S.) Aug 2020 - present
  - Ph.D. in Computer Science (in progress)
- **University of Southern California** (Los Angeles, U.S.) Aug 2017 - May 2019
  - M.S. in Electrical Engineering **GPA: 3.73/4.0**
- **Chongqing University** (Chongqing, China) Sept 2013 - Jun 2017
  - B.Eng. in Communication Engineering **GPA: 3.63/4.0**
- **National Sun Yat-sen University** (Kaohsiung City, Taiwan) Feb 2016 - Jun 2016
  - Exchange Program **GPA: 4.17/4.3**

PUBLICATIONS

- **Spoken Language Intent Detection using Confusion2Vec**
  Mu Yang*, Prashanth Gurunath Shivakumar*, Panayiotis Georgiou *(*: Equal Contribution, same below)*
  Interspeech, 2019.
- **Deep Structured Neural Network for Event Temporal Relation Extraction**
  Rujun Han*, I-Hung Hsu*, **Mu Yang**, Aram Galstyan, Ralph Weischedel, Nanyun Peng
  CoNLL, 2019.
- **Biomedical Event Extraction with Hierarchical Knowledge Graphs**
  Kung-Hsiang Huang, **Mu Yang**, Nanyun Peng
  EMNLP (findings), 2020.

WORK EXPERIENCE

- **Resource Employee** (USC Information Sciences Institute, LA, U.S.) Aug 2019 - Present
  Plus Lab, Supervisor: Prof. Nanyun (Violet) Peng
  - NLP projects including Event Extraction and Event Temporal Relation Extraction.
- **Biomedical Image Processing R&D Intern** (Cedars-Sinai Medical Center, LA, U.S.) May 2018 - Oct 2018
  Bioimage Informatics Lab, Supervisor: Dr. Arkadiusz Gertych
  - Develop data processing and CNN model pipelines to perform TB detection on digital slides of human tissue.

SELECTED PROJECTS

- **Lyrics Dataset Collection, Cleaning and Genre Classification** (USC, U.S) Oct 2018 - Nov 2018
  - Web crawled lyrics using the metadata returned by iTunes search API, including song name, artist, genre.
  - Collected ~14k lyrics for 8 different genre labels after data cleaning.
  - Performed classification using models including Naïve Bayes, SVM, Bidirectional LSTM.
- **WaveNet-based Singing Voice Synthesis** (USC, U.S.) Aug 2018 - Nov 2018
  - Collected isolated vocal tracks and employed Gentle to obtain time-aligned phonetic transcripts.
  - Trained WaveNet-based Timbre model to predict MFSC and Aperiodicity parameters providing control inputs including singer identity, F0, phoneme identity, etc.
  - Fed predicted MFSC and Aperiodicity coefficients and true F0 into WORLD Vocoder to synthesize audio.
- **DNN-based Acoustic Model and ASR Training (**USC, U.S.**)** Oct 2018
  - Trained a DNN Acoustic Model(AM) for audio-to-phoneme prediction on force aligned TED-LIUM dataset.
  - Created a dictionary and encoded a Language Model(LM) for a small piece of text.
  - Used Kaldi toolkit to train a complete ASR based on the AM and LM, ran decoding for self-spoken recordings.
- **Parallel second-order filter equalizer design for loudspeaker-room correction** (USC, U.S.) May 2018
  - Implemented second-order filter based equalizers in Matlab with different target frequency responses.
  - Calibrated Room Impulse Responses from multiple databases with the equalizers.
  - Applied equalizers on audios and asked 21 people to give preference on un-equalized and equalized audios.
- **Psychoacoustics Simulation and Validation** (USC, U.S.) Mar 2018
  - Simulated binaural localization using HRTFs in Matlab. Analyzed the effect of Cone of Confusion by hearing test.

- Designed hearing test for Weber's Law validation experiment using successive tones and white noise.

- **Faster-RCNN for Pedestrian Detection in Videos** (CQU, China) Feb 2017 - Jun 2017
  - Trained a Faster-RCNN framework on Caltech and VOC pedestrian dataset.
  - Generated bounding boxes marking pedestrians in videos.

ACTIVITY & AWARDS

- Grader of EE483(Signal Processing) at USC Aug 2018 - May 2019
- National Scholarship of China (top 1%) Oct 2015
- Outstanding Student Scholarship at CQU, consecutive Apr.2014 - Mar.2016
- Meritorious Winner, 2016 US Interdisciplinary Contest In Modeling(ICM) Feb.2016

SKILLS

- **Programming language**: Python, Unix Shell, Matlab, C/C++, Java.
- **Technical tools:** Pytorch, Tensorflow, Keras, Kaldi, Vim, Git, Audacity.