YUSONG WU

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EDUCATION

Beijing University of Posts and Telecommunications   Beijing, China
BE in Automation   09/2016 – 06/2020 (expected)
- GPA: 3.43/4; Rank: Top 15%
- English Proficiency: GRE (158(V)+169(Q)+3.0), TOEFL: (29(L)+29(R)+25(S)+23(W)= 106)
- Personal Page: https://lukewys.github.io/

SKILLS

Programming: C, C++, Python, Tensorflow, MATLAB; Deep Learning; Music: Orchestral Percussion playing.

PUBLICATIONS

- *Synthesising Expressiveness in Peking Opera via Duration Informed Attention Network.* **Yusong Wu**, Shengchen Li, Chenzhu Yu, Heng Lu, Chao Weng, Dong Yu. Submit to 45th International Conference on Acoustics, Speech, and Signal Processing (ICASSP 2020)
- *Learning Singing From Speech*. Liqiang Zhang, Chengzhu Yu, Heng Lu, Chao Weng, **Yusong Wu**, Xiang Xie, Zijin Li, Dong Yu. Submit to ICASSP 2020
- *Guqin Dataset: a symbolic music dataset*. **Yusong Wu**, Shengchen Li. Proceedings of China Conference on Sound and Music Technology (CSMT 2019)
- *Distinguishing Chinese Guqin and Western Baroque pieces based on statistical model analysis of melodies*. **Yusong Wu**, Shengchen Li. International Symposium on Computer Music Multidisciplinary Research (CMMR 2019)

ACADEMIC AND RESEARCH EXPERIENCE

Singing Synthesis System   08/2019- now
Research Intern, Tencent AI Lab.
- Adapting from DurIAN system to build a synthesis singing voice by outputting Mel-spectrogram using phoneme and musical input, and generated audio using WaveRNN.
- Expressive Singing Performance: Synthesis high-quality Peking Opera singing with expressiveness in singing and generate singing with Peking Opera style given pop song score input.
- Learning Singing From Speech: Generate singing with the voice learned from speech.

Statistical Approach to Distinguishing Different Music Genre   01/2019- 05/2019
Advisor: Shengchen Li, Embedded Artificial Intelligence Research Group
- Proposed statistical approach, especially melodic internal histogram and Markov chain to differentiate music genre, by extracting feature distribution and measure similarity using Kullback–Leibler divergence.
- Experimented the proposed method on Western Baroque and Chinese Guqin pieces, conducted significance test in the results and demonstrated the effectiveness of the method.

Symbolic Music Dataset Compilation   01/2019- 07/2019
Advisor: Shengchen Li, Embedded Artificial Intelligence Research Group
- Collected a comprehensive set of symbolic music dataset that could be used in computational musicology and music arrangement.
- Contribute to the inherit of Chinese Guqin music, an ancient and beautiful art form

Machine Learning Based Music Arrangement   05/2017- 05/2018
- Trained a Long Short-Term Memory (LSTM) model to automatically generate music based on user input.
- Investigated in hyperparameter tuning and model evaluation, and tested model on simple melodies such as *Twinkle, Twinkle Little Star* and *For Elise*.

ONLINE COURSES TAKEN

- Deep Learning (Deeplearning.ai): 98/100
- Machine Learning (Stanford University): 95/100
- Game Theory I+II (Stanford University): 100/100
- Algorithm Part1 (Stanford University): 100/100