Tzu Chun, Hsu

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EDUCATION

Zhejiang University   09 2016 – 07 2020
Bachelor of Computer Science   *Hangzhou, China*

- Last two years cumulative GPA: 3.30/4.00

PROJECTS

Chord learning and adversarial framework for symbolic music generation 🔗   04 2018 – 05 2019
Hangzhou, China

- Proposed a chord learning framework for multi-track symbolic music generation based on VAE and GAN, and implemented with PyTorch.
- Improved VAE to extract chords more easily.
- Improved WGAN-GP to solve mode collapse problem, vanishing gradient problem, and bad results of some audio tracks.
- Proposed three distinct loss functions, element-wise, discriminator dominant, and hybrid.

Voice Conversion Based on Generative Adversarial Networks 🔗   03 2020 – 05 2020
Hangzhou, China

- Improved StarGAN-VC2 based on multi-speaker non-parallel corpus.
- Introduced WGAN-div to resolve k-Lipschitz constraint of WGAN.
- Provided new generator network by replacing cIN layer with trainable AdaIN layer for better performance.
- Introduced neural vocoder, WaveGlow, to generate high quality speech from mel-spectrograms.

AWARDS

CCCC-Mobile Application Innovation Contest   09 2018
First Prize   *Hangzhou, China*

The 4th "Internet+" Innovation and Entrepreneurship Competition   09 2018
Gold Award   *Hangzhou, China*

Hong Kong, Macau, and Taiwan student scholarship   09 2018
Third Prize   *Hangzhou, China*

College Students' Innovative Entrepreneurial Training Plan Program (SRTP)   04 2018 – 05 2019
Excellent   *Hangzhou, China*

Hong Kong, Macau, and Taiwan student scholarship   12 2019
Second Prize   *Hangzhou, China*

EXPERIENCE

The University of British Columbia Vancouver Summer Program   07 2019 – 08 2019
Vancouver, Canada

- Intensive 4-week academic program for 2 courses, "Algorithms and the World Wide Web" and "Building Modern Web Applications".
- Collaborated with my teammates to complete our projects as team leader.
- Experienced the active study atmosphere in UBC, and broadened my horizons.

TECHNICAL SKILLS

- **Languages:** Python, Java, C, JavaScript

- **Technologies/Frameworks:** PyTorch, Keras, OpenCV, Spring Boot, Vue.js, MySQL, Flask, Node.js, MATLAB, Git, MongoDB, LaTeX