

TZU CHUN, HSU

New Taipei City, Taiwan

☎ +886-987605719 (Taiwan) ✉ vm3y3rmp40719@gmail.com  [tzu-chun-hsu-ab4b3b188](https://www.linkedin.com/in/tzu-chun-hsu-ab4b3b188)  [Oscarshu0719](https://github.com/Oscarshu0719)

EDUCATION

Zhejiang University

Bachelor of Computer Science

- Last two years cumulative GPA: 3.30/4.00

09 2016 – 07 2020

Hangzhou, China

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