

Hsiao Wen Yi

✉ s101062219@gmail.com

in LinkedIn

GitHub

🌐 Google Scholar

I am a Research Scientist at ByteDance, Seed Team.

I do **research** (>1K citations), and love to code and share (>2.5K stars on Github).

Expertise - Audio, Music, Digital Signal Processing, Computer Vision, Large Language Model, Machine Learning, Deep Learning, Recommendation System.

Work Experiences

- 2025.02 – Present **Research Scientist**, ByteDance
- 2024.01 – 2025.02 **USA O-1A Visa Application**, Career Break
- 2024.02 – 2024.12 **Senior Research Engineer (IC4)**, Taiwan AILabs
- 2019.04 – 2024.02 **Research Engineer (IC3)**, Taiwan AILabs

Education

- 2016 – 2018 **M.Sc. Computer Science, National Tsing Hua University.**
Thesis: *Automatic Symbolic Music Generation Based on Convolutional GANs.*
Advisor: Dr. Yi-Hsuan Yang
- 2012 – 2016 **B.Sc. Computer Science, National Tsing Hua University.**

Publications

Conference Proceedings

- 1 Y. H. Lan, **W. Y. Hsiao**, and et al., “Musicongen: Rhythm and chord control for transformer-based text-to-music generation,” in *Proceedings of International Society on Music Information Retrieval (ISMIR)*, 2024. 🔗 URL: <https://arxiv.org/html/2407.15060v1>.
- 2 Y. T. Yeh, **W. Y. Hsiao**, and et al., “Hyper recurrent neural network: Condition mechanisms for black-box audio effect modeling,” in *Proceedings of International Conference on Digital Audio Effects (DAFX)*, 2024.
- 3 Y. Chen, **W. Y. Hsiao**, and et al., “Towards automatic transcription of polyphonic electric guitar music: A new dataset and a multi-loss transformer model,” in *Proceedings of E Int. Conf. Acoustics, Speech and Signal Processing (ICASSP)*, 2022. 🔗 URL: <https://arxiv.org/abs/2202.09907>.
- 4 **W. Y. Hsiao**, D. Y. Wu, and et al., “DDSP-based singing vocoders: A new subtractive-based synthesizer and a comprehensive evaluation,” in *Proceedings of International Society on Music Information Retrieval (ISMIR)*, 2022. 🔗 URL: <https://arxiv.org/abs/2208.04756>.
- 5 C. Y. Chiu, J. Ching, **W. Y. Hsiao**, and et al., “Source separation-based data augmentation for improved joint beat and downbeat tracking,” in *Proceedings of European Signal Processing Conference (EUSIPCO)*, 2021. 🔗 URL: <https://arxiv.org/abs/2106.08703>.
- 6 **W. Y. Hsiao** and et al., “Compound word transformer: Learning to compose full-song music over dynamic directed hypergraphs,” in *Proceedings of AAAI Conf. Artificial Intelligence (AAAI)*, 2021. 🔗 URL: <https://arxiv.org/abs/2101.02402>.
- 7 Y. H. Chen, Y. S. Huang, **W. Y. Hsiao**, and et al., “Automatic composition of guitar tabs by transformers and groove modeling,” in *Proceedings of International Society on Music Information Retrieval (ISMIR)*, 2020. 🔗 URL: <https://arxiv.org/pdf/2008.01431>.

- 8 C. Y. Chiu, **W. Y. Hsiao**, and et al., "Mixing-specific data augmentation techniques for improved blind violin/piano source separation," in *IEEE Int. Workshop on Multimedia Signal Processing (MMSP)*, 2020. [URL: https://arxiv.org/abs/2008.02480](https://arxiv.org/abs/2008.02480).
- 9 **W. Y. Hsiao**, H. W. Dong, and et al., "Musegan: Multi-track sequential generative adversarial networks for symbolic music generation and accompaniment," in *Proceedings of International Society on Music Information Retrieval (ISMIR)*, 2019. [URL: https://arxiv.org/abs/1709.06298](https://arxiv.org/abs/1709.06298).
- 10 **W. Y. Hsiao**, Y. C. Yeh, and et al., "Jamming with yating: Interactive demonstration of a music composition ai," in *ISMIR 2019, Late Breaking Demo*, 2018. [URL: https://archives.ismir.net/ismir2019/latebreaking/000003.pdf](https://archives.ismir.net/ismir2019/latebreaking/000003.pdf).
- 11 Y. C. Yeh, **W. Y. Hsiao**, and et al., "Learning to generate jazz and pop piano music from audio via mir techniques," in *ISMIR 2019, Late Breaking Demo*, 2018. [URL: https://archives.ismir.net/ismir2019/latebreaking/000005.pdf](https://archives.ismir.net/ismir2019/latebreaking/000005.pdf).

Journal Articles

- 1 Y. C. Yeh, **W. Y. Hsiao**, and et al., "Automatic melody harmonization with triad chords: A comparative study," *Journal of New Music Research*, 2021. [URL: https://arxiv.org/abs/2001.02360](https://arxiv.org/abs/2001.02360).

Skills

Languages	English, Chinese
Coding	Python: Pytorch, Tensorflow C++: JUCE, Eigen, Libtorch
System	Git, Docker, k8s

Experiences

Awards and Achievements

2019	Main Contributor - Yating Music , Open-source GitHub Organization
2018	Silver Award , 9th Merry Electronics Master Thesis Award (4,500 USD)
2014	Vice Director of Student Piano Club

Open Source Projects

1.8k stars	MuseGAN , Official Repository for AAAI18 Paper
265 stars	Compound Word Transformer , Official Repository for AAAI21 Paper
248 stars	DDSP Singing Vocoders , Official Repository for ISMIR22 Paper
226 stars	Miditoolkit , Popular Python Package (used by >300 projects) for Handling MIDI IO
128 stars	Symbolic Musical Datasets , A Collection of Symbolic Music Dataset in Various Formats
108 stars	Lead Sheet Dataset , A Collection of Lead Sheet Dataset in Various Formats
94 stars	ReaRender , A Python Package for Automatic Rendering using REAPER
52 stars	SF Segmenter , A Python Package for Structure Analysis