

Zih-Syuan Lin

PhD Student in Music Technology

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 portfolio

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 Montréal, Canada

EDUCATION

- 8/2025 – present **McGill University** Montréal, Canada
PhD in Music Technology, Supervisor: Ichiro Fujinaga
• Research area: music information retrieval, symbolic music recognition, focusing on orchestral texture in Western Classical music.
- 9/2021 – 6/2023 **National Tsing Hua University** Hsinchu City, Taiwan
MS in Industrial Engineering & Engineering Management, Supervisor: Chen-Fu Chien
• Thesis: Advanced Planning and Scheduling System for The Multi-stage Processes of Final Assembly, Testing and Packing in Consumer Electronics Industry and An Empirical Study.
- 9/2017 – 6/2021 **National Tsing Hua University** Hsinchu City, Taiwan
BS in Industrial Engineering & Engineering Management
• Engaged in a study exchange program at the Department of Industrial Engineering, Tsinghua University, Beijing, China in the fall semester of 2019.
• Academic Achievement Award (Top 5% in department, 2018).

RESEARCH & TA EXPERIENCES

- 6/2023 – 06/2025 **Research Assistant** Taipei City, Taiwan
Music and Culture Technology Lab, Institute of Information Science, Academia Sinica
• **Orchestral texture classification:** Developed supervised models to classify instrumental roles (melody, accompaniment, rhythm) in classical orchestral music, using symbolic representations.
• **S3 dataset:** Annotated harmony, cadence, and musical form in classical symphonic works; contributed to the validation and consistency of symbolic data formats.
- 2/2023 – 6/2023 **Teaching Assistant, Music Information Retrieval (Graduate Level)** Hsinchu City, Taiwan
Department of Computer Science, National Tsing Hua University
• Designed a new assignment introducing counterpoint to non-music-major students through an LSTM-based music generation task.
- 2/2022 – 6/2022 **Teaching Assistant, Seminar (Graduate level)** Hsinchu City, Taiwan
AIMS Fellows Executive Master Program, National Tsing Hua University
- 7/2021 – 8/2021 **Summer Intern** Hsinchu City, Taiwan
Artificial Intelligence for Intelligent Manufacturing Systems (AIMS) Research Center
• Analysed real-world data and identified key properties influencing the line width of printed circuit boards as the preliminary study of applying virtual metrology on corresponding manufacturing process.

PUBLICATIONS

- Z.-S. Lin, J.-Y. Wang, L. Su, "A Comparative Study of Statistical Features and Deep Learning for Orchestral Texture Classification," in Proc. of the 17th Asia Pacific Signal and Information Processing Association Annual Summit and Conf. (APSIPA ASC), 2025, Singapore.
- Z.-S. Lin*, Y.-C. Kuo*, T.-Y. Hung, W.-Y. Lin, Y.-H. Chu, T.-K. Wang, J.-H. Huang, C. Chang, C. Julio, G. Hsieh, and L. Su (2024), "S3: A Symbolic Music Dataset for Computational Music Analysis of Symphonies," in Extended Abstracts for the Late-Breaking Demo Session of the 25th Int. Society for Music Information Retrieval Conf. (ISMIR), 2024, San Francisco, United States.

CREATIVE WORKS

- 7/2020 – 9/2023 **Mini-album *The Ordinary***
• Released four original Mandarin pop songs as co-composer, arranger, and producer of GuguDrive Band.
• Organized recording sessions with string quintet/sextet and coordinated an outdoor MV production.
- 2/2020 – 1/2021 **Mayfly no.1-4**
• Composed a four-piece piano suite exploring the theme of ephemerality.
• The third song, *Sunset*, was publicly broadcast as closing music at the NTHU Library (Nov 2021).

SKILLS

Music Related Skills – Arranging, composing, piano performing, french horn (basic proficiency)

Technical Skills – Programming (Python), machine learning (PyTorch, scikit-learn), data analysis