

# Lejun Min

Researcher, Artist

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## EDUCATION

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### Center for Computer Research in Music and Acoustics, Stanford University

Sept. 2024 – Present

Master of Art in Music, Science, and Technology (Fellowship)

California, United States

- GPA: 4.0 / 4.0.
- Advisor: Prof. Julius O. Smith, Prof. Takako Fujioka.

### ACM Honor Class, Shanghai Jiao Tong University

Sept. 2019 – June 2023

Bachelor of Engineering in Computer Science (Fellowship)

Shanghai, China

- An elite CS program for **top 5%** students.
- GPA: 88.5/100 (ranking: 6/30).

## PUBLICATIONS

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**L. Min**, S. Chen, M. Bosi, “Leveraging Rotational M/S Coding and Machine Learning in Stereo Audio Coding”, in *International Workshop on Sound Signal Processing Applications (IWSSPA 2025)*, Costa Ballena, Spain, July 2025. [[Program](#)]

X. Qu, Y. Bai, Y. Ma, Z. Zhou, K. Lo, J. Liu, R. Yuan, **L. Min**, X. Liu, T. Zhang, X. Du, S. Guo, Y. Liang, Y. Li, S. Wu, J. Zhou, T. Zheng, Z. Ma, F. Han, W. Xue, G. Xia, E. Benetos, X. Yue, C. Lin, X. Tan, S. Huang, W. Chen, J. Fu, G. Zhang, “MuPT: A Generative Symbolic Music Pretrained Transformer”, in *Proc. 13<sup>th</sup> International Conference on Learning Representations (ICLR 2025)*, Singapore, April 2025. [[arXiv](#)] [[OpenReview](#)] [[Demo](#)]

Z. Wang, **L. Min**, G. Xia, “Whole-song Hierarchical Generation of Symbolic Music Using Cascaded Diffusion Models”, **Spotlight (top 5%)** in *Proc. 12<sup>th</sup> International Conference on Learning Representations (ICLR 2024)*, Vienna, Austria, May 2024. [[arXiv](#)] [[OpenReview](#)] [[Demo](#)]

**L. Min**, J. Jiang, G. Xia, J. Zhao, “Polyffusion: A Diffusion Model for Polyphonic Score Generation with Internal and External Controls”, in *Proc. 24<sup>th</sup> International Society for Music Information Retrieval Conference (ISMIR 2023)*, Milan, Italy, November 2023. [[arXiv](#)] [[Poster](#)] [[Demo](#)]

## RESEARCH EXPERIENCE

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### Music-text Joint Embedding

Oct. 2025 – Present

Research Intern at Smule AI Lab

Remote

- Building the next-generation music-text joint embedding.
- Advisor: Yongyi Zang.

### Automatic Mixing with Audio Representation Learning and Generation

June 2025 - Sept. 2025

Research Intern at Music Team of Sony CSL Paris

Paris, France

- Designed an end-to-end (re-)mixing and mastering system using audio representation learning and generation. This is one of the pioneer works on automatic mixing with a fully generative approach.
- Advisor: Dr. Stefan Lattner.

### Hierarchical Generation and Performance Rendering of Symbolic Music

Sept. 2023 – Feb. 2024

Research Assistant at Music X Lab, MBZUAI

Abu Dhabi, United Arab Emirates

- Designed and implemented comprehensive experiments for the hierarchical generation of symbolic music, with a cascaded diffusion model as backend. Work published at ICLR 2024.
- Advisor: Prof. Gus Xia.

## Controllable Symbolic Music Generation with Diffusion Models

Research Assistant at Music X Lab, MBZUAI

June 2022 – Dec. 2022

Abu Dhabi, United Arab Emirates

- Achieved state-of-the-art polyphonic music generation using diffusion models, with two novel control paradigms: internal control via masked generation, and external control via cross-attention mechanism.
- Work published at ISMIR 2023.
- Advisor: Prof. Gus Xia.

## Deep Learning on Piano Reduction and Orchestration

Researcher at Music X Lab, New York University, Shanghai

Jan. 2022 – May 2022

Shanghai, China

- Projected piano and orchestral scores to a joint latent space with variational autoencoders, and applied contrastive learning on the latent space with end-to-end autoencoder training.
- Advisor: Prof. Gus Xia.

## PROGRAMMING PROJECTS

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### Computer Graphics

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#### Gigantic Splight (*Python*)

June 2022

An interactive 3D fluids simulation based on Taichi framework.

#### Scotty3D (*C++*)

Mar. 2022

A comprehensive CG project including software rastization, interactive mesh editing, realistic path tracing, and dynamic animation.

#### Ray Tracer (*Rust*)

Aug. 2020

A complete ray tracing engine.

### Audio Signal Processing

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#### Simple EQ (*C++*)

Jan. 2022

A step-by-step JUCE learning project for audio plugin development.

#### Audiobia (*Python & Tensorflow*)

May 2021

Audio classification using Google's EfficientNet and Harmonic Percussive Source Separation (HPSS).

### Compiler, Computer Architecture & System

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#### Mx Compiler (*Java*)

May 2021

A completely hand-made compiler for a toy language (Java subset) that surpasses -o1 optimization.

#### RISC-V CPU (*Verilog*)

Dec. 2020

An emulated 5-pipelined RISCV32I CPU with real-world FPGA implementation.

#### Python Interpreter (*C++*)

Feb. 2020

A Python language interpreter.

### Software Development

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#### Train Ticket System (*C++*)

June 2020

A cooperated project including backend coding, B+ Tree data structure implementation and frontend website design.

## ART PRACTICES

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### Live Performance & New Media Art

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## A Chan Conversation

May 2025

A sonic conversation with an ancient Chan Buddhist monk. A Live performance that explores spatialized sound perception with Ambisonics. Performed on CCRMA Open House Concert 2025.

## Interface / Narrative Design

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### Kandinsky Sonified (ChucK & ChuGL)

Nov. 2024

An interactive audiovisual music sequencer that creates and sonifies Kandinsky-like abstract paintings.

### Fireflies (ChucK & ChuGL)

Oct. 2024

An interactive music therapy journey embodying a firefly. Essentially a sound peeking visualization.

## Music

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### 忆久 (Memories Last Long)

June 2023

A song and a music video dedicated to the graduates of 2023, Zhiyuan College.

### Should Have Known Better (piano & synth cover)

Feb. 2023

Piano, synth & singing performance.

### 晚海 (Sunset Sea)

Dec. 2021

A single published under CEM Records, one of the most prestigious electronic music labels in China.

## TEACHING

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### **Reinforcement Learning (CS3316)**

Spring 2023

Teaching Assistant at SJTU

Shanghai, China

- Designed the final project involving single- or multi-agent learning for simulated hands and legged robot.
- Lecturer: Prof. Weinan Zhang.

### **Design and Analysis of Algorithms (AI2615)**

Spring 2022

Teaching Assistant at SJTU

Shanghai, China

- Lecturer: Prof. Chihao Zhang.

### **Principle and Practice of Computer Algorithms (CS1952)**

Summer 2021

Teaching Assistant at SJTU

Shanghai, China

- Designed a comprehensive ray tracing tutorial written in the Rust language. The repository received 100+ stars on GitHub.
- Supervisor: Prof. Yong Yu.

## LANGUAGE PROFICIENCY

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Mandarin Chinese (native), English (fluent), French (beginner)

**TOEFL: 112** (Reading 30, Listening 30, Speaking 24, Writing 28)

**GRE: Verbal 162, Quantitative 170, Writing 4.0**