

Mingyang Yao

✉ m5yao@ucsd.edu ☎ (858)305-1264 📄 Google Scholar 🌐 Personal Website

Education

University of Rochester

Ph.D in Electrical and Computer Engineering

Supervisor: Prof. Zhiyao Duan

Aug 2026 –

University of California, San Diego

BS in Mathematics-Computer Science

BS in Cognitive Science with spec. in Machine Learning and Neural Computation

GPA: 3.93/4.00 – Cum Laude

Advisors: Dr. Ke Chen, Prof. Taylor Berg-Kirkpatrick, Prof. Shlomo Dubnov

Sept 2022 – Dec 2025

Research Interests

- Music Generation
- Music Information Retrieval
- Music Representation Learning

Publications

From Generality to Mastery: Composer-Style Symbolic Music Generation via Large-Scale Pre-training [Paper Link](#) [↗](#)

Mingyang Yao, Ke Chen

The Sixth Conference on AI Music Creativity (AIMC 2025); Oral Presentation

BACHI: Boundary-Aware Symbolic Chord Recognition Through Masked Iterative Decoding on Pop and Classical Music [Link](#) [↗](#)

Mingyang Yao, Ke Chen, Shlomo Dubnov, Taylor Berg-Kirkpatrick

IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP 2026)

The development of FEDUPP: Feeding Experimentation Device Users Processing Package to Assess Learning and Cognitive Flexibility [Paper Link](#) [↗](#)

Mingyang Yao*, Avraham M Libster*, Shane Desfor, Freiya Malhotra, Nathalia Castorena,

Patricia Montilla-Perez, Francesca Telese

Full Paper Submitted to Journal and Under Review

Research Experience

Conditional Symbolic Music Generation | Independent Research

Feb 2024 – April 2025

Mentor: Ke Chen [↗](#) / Adobe Research

- Developed 16k multi-genre MIDI corpus, 4 classical composer subsets and enhanced REMI representation
- Designed two-stage training combining large-scale pre-training with composer-specific fine-tuning, achieving superior few-shot style transfer compared to [NotaGen-finetuned](#) [↗](#)
- Established comprehensive evaluation framework integrating style fidelity metrics, harmonic analysis, and human preference studies to assess compositional quality
- Managed complete research pipeline, [demo](#) [↗](#) page, and manuscript accepted at AIMC 2025

Symbolic Chord Recognition | Independent Research

June 2025 – Sept 2025

Mentor: Ke Chen [↗](#), Taylor Berg-Kirkpatrick | University of California San Diego

- Architected boundary-aware transformer with piano-roll patch embeddings, FiLM-based conditioning,

and confidence-ordered masked decoding for chord prediction

- Demonstrated that confidence-ordered prediction achieves state-of-the-art performance with 6% improvement on classical music benchmarks
- Curated POP909-CL dataset based on [POP909](#) with expert annotations on chords and other metas, including time signature, key changes, and start beat
- Completed research pipeline, [demo](#), and manuscript accepted at ICASSP 2026

Telese Lab | Research Assistant

Sept 2023 – Present

Principal Investigator: Francesca Telese

- Developed FEDUPP, the 1st open-source Python [pipeline](#) for automated FED3 feeding data analysis
- Integrated machine learning methods including unsupervised clustering for semi-automated labeling and LSTM classifiers for feeding quality assessment
- Led as co-first author, leading methodology design, experimental validation, and manuscript preparation with coordination among 4 people.
- Implemented computer vision pipeline using fine-tuned YOLOv11 and DeepLabCut for automated video processing and mouse trajectory tracking

Service

Public Service

Program Chair, IJCAI – AI and Health Track 2026

Feb 2026 – Mar 2026

Teaching

Instructional Apprenticeship

Sept 2023 – Dec 2023

Course: Cogs 18 – Introduction to Python / Instructor: Eric Morgan

- Led weekly discussion sections and office hours, providing individualized guidance
- Graded assignments and exams with timely feedback, maintaining consistent standards across sections
- Achieved 100% positive recommendation rate from student evaluations

Reader/Grader

April 2024 – Dec 2024

- Math 154 – Discrete Math and Graph Theory (Spring 2024; Professor William Wesley)
- Math 20D – Introduction to Differential Equations (Fall 2024; Professor Rishabh Dixit)

Awards and Honors

UCSD Provost Honor (2022–2025)

Hefei No.1 High School International Department Salutatorian (2022)

Chinese Musicians' Association (CMA) Piano Graded Examination (Amateur), Level 10 (2015)