

Jingjing Tang

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Education

- Queen Mary University of London** 09/2020 – Current
PhD in Artificial Intelligence and Music, Center for Digital Music
- Jointly supervised by Dr. György Fazekas and Prof. Geraint Wiggins
 - **PhD Topic:** *Deep Generative Modelling for Expressive Piano Performance: From Symbolic Interpretation to Audio Realisation*
- The Chinese University of Hong Kong, Shenzhen (CUHKSZ)** 09/2016 – 05/2020
Bachelor of Science in Statistics, Major: Data Science

Work Experience

- Research Intern** *Tokyo, Japan*
Sony Computer Science Laboratories (Sony CSL), Japan 04/2025 – Now
- Developing transcription and synthesis models to convert between audio performances and Hackkey data, which is captured using a specialised optical sensor integrated into the piano.
- Research Intern** *Tokyo, Japan*
National Institute of Informatics 02/2024 – 06/2024
- Developed an integrated system to transform symbolic music scores into expressive piano performances by combining a transformer-based performance rendering model with a fine-tuned neural MIDI synthesiser
 - Conducted experiments with the ATEPP dataset, evaluating the system using both objective metrics and subjective listening tests. Results showed effective reproduction of human-like expressiveness and the acoustic ambience of environments such as concert halls and recording studios.
- Research Assistant** *Chengdu, China*
The West China Center of Medical Sciences 08/2018 – 10/2021
- Evaluated data collected from research that conducted relative randomized clinical trials through meta-analysis and meta-regression analysis with R software
 - Applied machine learning algorithms including Random Forest, XGBoost, and so on to clinical data and optimized models for mortality prediction using R and Python
- Algorithm Engineer** *Shenzhen, China*
GeneMind Biosciences Company Limit 04/2020 – 09/2020
- Proposed deep learning solutions to detect centers of spots in photos taken by microphotography, and developed frameworks using Residual Fully CNNs for the gene detection task to assist base call process

Research Projects

- Deep Generative Modelling for Expressive Piano Performance - PhD** 09/2020 - Current
- Created and released a large-scale dataset of transcribed expressive piano performances, including more than 11,000 performances of classical piano, with detailed composition entity linking applied. The dataset incorporates score MIDI, performance MIDI and the corresponding audio, providing a comprehensive resource for training and evaluating expressive performance models. ([Link](#)  to Dataset Details)
 - Developed pianist identifiers using 1D-Convolutional Neural Networks (CNNs), achieving an accuracy of 87% in distinguishing performance styles. The system was trained on a set of aligned expressive piano performances and scores. It was designed to evaluate the effectiveness of performance style transfer techniques. ([Link](#)  to Project Details)
 - Designed and implemented a score-to-performance generation system based on a Transformer encoder architecture. This system takes classical piano performance MIDI files as input and generates expressive performances that emulate various pianists' playing styles, incorporating tempo fluctuations, dynamics, and articulation. ([Link](#)  to Project Details)
 - Developed an integrated system that generates expressive performance audio by combining a score-to-performance

model with a neural MIDI synthesis system. The project was partially completed at the National Institute of Informatics and is ongoing. ([Link](#) to Project Details)

Speaker Identification with Deep Neural Networks - Undergraduate

02/2019-09/2020

- Researched speaker identification tasks based on CNN models, optimising performance with additional sources created through harmonic-percussive source separation.
- Proposed a novel multi-channel CNN structure that improved prediction accuracy by 9% compared to single-channel CNN models.

Publications

The full publication list, all peer-reviewed, can be found on my [Google Scholar profile](#).

- **Jingjing Tang**, Xin Wang, Zhe Zhang, Junichi Yamagishi, Geraint Wiggins, György Fazekas, “MIDI-VALLE: Improving Expressive Piano Performance Synthesis Through Neural Codec Language Modelling”, accepted by International Society for Music Information Retrieval Conference (ISMIR), 2025
- **Jingjing Tang**, Erica Copper, Xin Wang, Junichi Yamagishi, György Fazekas, “Towards An Integrated Approach for Expressive Piano Performance Synthesis from Music Scores”, *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, 2025
- Tzu-Ching Hung, **Jingjing Tang**, Kit Armstrong, Yi-Cheng Lin, Yi-Wen Liu, “EME33: A Dataset of Classical Piano Performances Guided by Expressive Markings with Application in Music Rendering,” *IEEE Big Data 2nd Workshop on AI Music Generation*, 2024.
- **Jingjing Tang**, Geraint A. Wiggins, George Fazekas, “Reconstructing Human Expressiveness in Piano Performances with a Transformer Network,” *The 16th International Symposium on Computer Music Multidisciplinary Research (CMMR)*, 2023, **Best Paper Nomination (Top 5)**.
- Eleanor Row, **Jingjing Tang**, George Fazekas, “JAZZVAR: A Dataset of Variations found within Solo Piano Performances of Jazz Standards for Music Overpainting,” *The 16th International Symposium on Computer Music Multidisciplinary Research (CMMR)*, 2023.
- **Jingjing Tang**, Geraint A. Wiggins, George Fazekas, “Pianist Identification Using Convolutional Neural Networks,” *The 4th International Symposium on the Internet of Sounds (IS2)*, 2023.
- Huan Zhang*, **Jingjing Tang***, Syed Rm Rafee*, Simon Dixon, George Fazekas, Geraint A. Wiggins, “ATEPP: A Dataset of Automatically Transcribed Expressive Piano Performance,” *International Society for Music Information Retrieval Conference (ISMIR)*, 2022. (*Co-Primary Author)
- Yuejiao Xie, **Jingjing Tang**, Nan Yang, Man-On Pun, “Large-Scale Multi-Channel Transformer-based Speaker Identification with Knowledge Transfer Using Harmonic-Percussive Source Separation,” *2022 31st Wireless and Optical Communications Conference (WOCC)*, 2022, pp. 1-6.

Teaching Experience

Course Demonstration and Delivery

09/2022-Current

- Provided tutoring and support for both undergraduate and master students in the Data Mining courses (ECS607U and ECS766P), answering course-related questions and offering feedback on assignments.
- Delivered R workshops to students in the Research Methods and Responsible Innovation (ECS7007P) and the Research Methods (ECS7029P) courses for master students.
- Currently a *Teaching Fellow* at Queen Mary University of London, responsible for the Data Mining course (ECS607U) and MSc projects supervision since September 2024.

Project Supervision

11/2022-Current

- Supervised 10 MSc students from 2022 to 2023, guiding them through project topic selection, offering ongoing advice, reviewing draft dissertations, and evaluating final outputs.
- Set to supervise 5 MSc students for their thesis projects in the upcoming academic year.

Skills

Programming: Python, PyTorch, Numpy, Pandas, R

Languages: Chinese (native), English (TOEFL: 106/120)