HUAN ZHANG

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EDUCATION

Queen Mary University of London, London, UK   September 2021 - Present
Ph.D student in Artificial Intelligence and Music, Center for Digital Music
Research Topic: *Computational modelling of expressive piano performance.*

Carnegie Mellon University, Pittsburgh, PA   September 2017 - May 2021
Bachelor of Science in Music and Technology, minor in Computer Science, GPA: 3.7/4.0

RESEARCH AND PROJECTS

H. Zhang, J. Tang, S. Rafee, G. Wiggins, G. Fazekas, S. Dixon. "ATEPP: A Dataset of Automatically Transcribed Expressive Piano Performance", In submission. *(2022).*

H. Zhang, Y. Jiang, Y. Jiang, P. Hu. "Learn By Referencing: Towards Deep Metric Learning for Singing Assessment", in proceeding of *22nd International Society for Music Information Retrieval Conference (ISMIR 2021)*

H. Zhang. A Performance Prototype for Soundcool Online. *Undergraduate Thesis. (2021)*

S. Dai, **H. Zhang**, R. Dannenberg. "Automatic Analysis and Influence of Hierarchical Structure on Melody, Rhythm and Harmony in Popular Music", in proceeding of *Joint Conference on AI Music Creativity (CSMC-MuMe 2020)*

R. Dannenberg, **H. Zhang**, A. Meena, A. Joshi, A. Patel, and J. Sastre. "Collaborative Music Creation and Performance with Soundcool Online", in proceeding of *6th Web Audio Conference (WAC 2020)*

PROFESSIONAL EXPERIENCE

Music Research and Development Intern   Dec 2020 - May 2021
Tencent Music Entertainment, Shenzhen, China
· Working under WeSing Audio and Music Lab (now LYRA Lab), investigated the task of Singing Assessment with triplet model architecture, see Research Work section [1].
· Trained audio auto-tagging model to analyze short video scene on the platform.
· Conducted a survey of music education applications in china and their technology solutions.

Music Research and Development Intern   June 2020 - Oct 2020
Kuaishou Technology, Beijing, China
· Tackled the task of automatic melody harmonization by proposing a seq2seq approach with transformer model.
· Completed the entire life-cycle including analyzing and processing data from Wikifonia, Hooktheory and POP909 symbolic datasets, tuning and training the transformer, to testing and inferencing.
· Proposed a melody harmonization evaluation scheme that's used to evaluate the quality of generated chord.

Freelance Music Critique   July 2015 - Present
· Hosted LiveinConcert Classical music Blog on Wechat public platform, wrote articles in Mandarin covering topics ranging from concert critique to classical music analysis.
· Published over 150 articles over the course of 6 years, reached to over 10000 audiences.

HONORS/AWARDS

UKRI PhD studentships in Artificial Intelligence and Music (AIM) receiver   Sept 2021
CMU Summer Internship Experience Fund (SIEF) Receiver   April 2019
Ranked top 1000 in Putnam Mathematical Competition   Dec 2017
Carnegie Mellon University Dean's List   2017-2019

INVOLVEMENT AND LEADERSHIP

ISMIR 2021 Volunteer   Nov 2021
· Worked with the industry & sponsorship team to maintain the sponsor booths on the Midspace platform.
· Helped in organizing the Lab showcase of Center for Digital Music in QMUL.

CMU Laptop Orchestra   Jan 2019 - May 2019
Collaborative Project

· A project lead by professor Roger Dannenberg and implemented by music technology students, it presents a Multi-thread, network-based real time laptop music-generation performance. I am contributing as one of the laptop instrumentalist with saxophone and piano, with jazz-style composition algorithm written in Serpent and synchronizing with the conductor over the network. [Performance Video (Youtube)](#)

Music Involvement

· Classical Piano Performance: In this performance video I played Bach's Well Tempered Clavier in b minor, book 1, and the Jeux D'eau by Maurice Ravel. [Performance Video (Youtube) (Bilibili)](#)
· With full musicianship training from solfege, counterpoint to orchestration, I was also able provide music theory tutorials for my colleges and peers.

SKILLS AND COURSEWORKS

QMECS707 - Digital Signal Processing	Fall 2021
QMECS741P - Music Perception	Fall 2021
CMU10605 - Machine Learning with Large Datasets	Fall 2020
CMU15780 - Graduate Artificial Intelligence	Spring 2021
CMU10701 - Introduction to Machine Learning (PhD)	Spring 2020
CMU15210 - Parallel and Sequential Data Structures and Algorithms	Fall 2019
CMU15213 - Introduction to Computer Systems	Fall 2019
CMU15323 - Computer Music Systems and Information Processing	Spring 2019
CMU11411 - Natural Language Processing	Fall 2019