Hao Hao **Tan**

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interest
generative models
music generation
music informatics
deep learning
comp. creativity

programming
Python, Java,
JavaScript,
C, C#, PHP

research
PyTorch, TensorFlow,
Keras, scikit-learn,
NLTK, music21

development
HTML5 + CSS3,
Flask, Unity

coursework
computer science
machine learning
artificial intelligence
neural networks
natural language proc.
advanced algorithms
information retrieval

music
jazz improvisation
music production

Education

2015–2019	**Nanyang Technological University** **BEng. Computer Science**, focus in Artificial Intelligence | CGPA: 4.91 / 5.00	Singapore

Experience

Aug'19–Now	**Singapore University of Technology and Design** *Research Assistant* Working on **controllable music generation** and **style transfer** based on emotion input.	Singapore
Jan-May'19	**Data Science and AI Research Center, NTU** *Student Research Assistant* Developed **PlayEmo** app with face recognition network for **autistics to learn emotion**.	Singapore
Jul-Oct'18	**ViSenze** *Software Engineering Intern* Maintained and enhanced internal **data pipeline** and **web-scraping services**.	Singapore
Jan–Jun'18	**PayPal** *Software Engineering Intern* Coded **compliance regulations** across transactions and revamped **functional testing** framework with TestNG for 2x product coverage.	Singapore

Publications

2019	**ChordAL: A Chord-Based Approach for Music Generation using Bi-LSTMs** *10th International Conference on Computational Creativity (ICCC), 2019*	Conference
2017	**Agent Madoff: A Heuristic Based Negotiation Agent For the Diplomacy Game** *3rd Int. Workshop on Conflict Resolution in Decision Making, IJCAI 2017*	Workshop

Selected Projects

2018-19	**AI Music Composition using Deep Learning** | Self-initiated final year project Proposed a chord-based generation approach for **automated music composition**.	Project
2019	**frenly** | NUS Hack&Roll − Top 8 Winners Developed a Chrome extension using NLP to **regulate social media behaviour**.	Hackathon
2019	**All-In-One Campus App** | NTU SCSE Hackathon − Top 5 Finalists Designed a mobile + web app for **integrating smart campus services**.	Hackathon

Co-curriculars

2016	**NTU Piano Ensemble** | Vice President	NTU Singapore
2017	**CUHK Chinese Debate Team** | Representative (Exchange)	CUHK Hong Kong
2016-17	**Asia Intervarsity Chinese Debate Competition** | Adjudicator	NTU Singapore
2015-16	**1st National Chinese Reading Movement** | Web Developer	NTU Singapore

Awards

2019	**URECA Exhibition Best Poster Award** | best undergrad. research poster	NTU Singapore
2016,17,19	**Dean's List** | awarded to top 1% of the cohort	NTU Singapore
2015	**ASEAN Scholarship** | awarded to selected undergrad. from ASEAN	Govt. of Singapore