# YAN HAN

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Graduate School of Comprehensive Human Sciences, University of Tsukuba

## EDUCATION

**University of Tsukuba** **10/2022 - 09/2024**
***Master's Degree in Informatics*** Average Score: 3.9/4.3
Core Modules: *Deep Learning, Natural Language Processing, Music Information Retrievel, Music Generation*

**Dalian University of Technology (985& double first-class)** **09/2017 - 06/2022**
***Bachelor's Degree in Computer Science*** Average Score: 82.6/100
Core Modules: *Discrete Mathematics I1 & I2, Data Structures and Algorithms, Fundamentals of Programming A, C++ Programming, Computer Organization and Architecture, Artificial Intelligence, Computer Networks*

## RESEARCH INTERESTS

➤ My research interest is exploring the intrinsic consistency of music notes, human languages, and mathematics.

**Directions**: *Lyrics/Music Generation&Understanding, Multi-modality Data Alignment, Multilingual Research*

## PUBLICATIONS

➤ **Accepted**

- **Han, Y.**, Wang, H. (2024, August). Modeling the Structural and Semantic Features for Japanese Lyrics Generation of J-pop Songs. In proceedings of the 21st Pacific Rim International Conference on Artificial Intelligence (PRICAI 2024). Japan.

  ➤ **Contributions**:we propose a lyrics generation model named Okashi that models structural and semantic features of lyrics simultaneously. We construct three Japanese lyrics datasets and annotate of structural and semantic labels automatically through carefully designed prompt templates. Experiments demonstrate that our model outperforms baseline models in terms of lyric quality and diversity, showcasing the effectiveness of our structural and semantic feature modeling.

➤ **Ongoing**

- Chord Conditional Automatic Songwriting System with Phrase-Motif Level Alignment

  ➤ **Contributions**: This research aims to develop an automatic song generation system that takes chord progression as input to generate lyrics and melody that are aligned in terms of structure and musicality, and to use vocal synthesis software to obtain complete musical score information.

➤ **Presentaion**

- Presented a demo on [Modeling the Rhyming Words and Rhythm for Lyrics Generation] at SIGMUS 138 in 2023.

## RESEARCH EXPERIENCE

➤ **Automatic Music Generation based on Deep Learning** **10/2018- 03/2019**
*College Students' Innovative Entrepreneurial Training Plan Program*

- This study developed a three-layer Recurrent Neural Network (RNN) generation model that uses MIDI-format note sequences as training data. After learning the arrangement patterns of the notes, the model is capable of generating note sequences with a certain degree of musicality.

## HONOURS AND AWARDS

- Monbukagakusho Honors Scholarship for Privately Financed International Students **10/2022- 03/2023**

## OTHER EXPERIENCES

**Hiroshima University Summer Cultural Program** **Hiroshima, Japan**
*Participated in a two-week summer camp at Hiroshima University to learn about Japanese culture and foster exchanges between the two countries.* **07/2018 - 08/2018**

## SKILLS

- **Programming:** C, C++, Python, LaTeX
- **Package:** Transformers, NLTK, Music21
- **Software:** Pycharm, VS Code, Colab, Git
- **Language Proficiency:** English: TOEFL - **(90/120)**, Japanese: JLPT N1 - **(139/180)**

## TEACHING

- GC23101: Signals and Systems (2023 Fall)