Eunsik Shin

Seoul, South Korea

https://eunsik-shin.github.io

EDUCATION

Seoul National University   Mar. 2022 – Present

Ph.D Candidate in School of Intelligence and Information   *Seoul, South Korea*

Inha University   Mar. 2016 – Feb. 2022

B.S. in Industrial Engineering (Minor in Statistics), summa cum laude (GPA 4.33/4.50)   *Incheon, South Korea*

RESEARCH EXPERIENCE

Seoul National University   Mar. 2022 – Present

Ph.D Candidate, Music and Audio Research Group (MARG) (Prof. Kyogu Lee)

- Conducting research on various topics within music information retrieval, user experience, and emotion recognition.

Seoul National University   Jul. 2021 – Dec. 2021

Research Intern, Music and Audio Research Group (MARG) (Prof. Kyogu Lee)

- Studied machine learning skills related to signal processing.
- Studied various topics in music information retrieval including music generation and voice conversion.

Korea Advanced Institute of Science and Technology (KAIST)   Jul. 2020 – Aug. 2020

Research Intern, Human Factors and Ergonomic Lab (HFEL) (Prof. Shuping Xiong)

- Studied data analyzing skills related to human factors and ergonomics.
- Research on "User Defined Walking-In-Place Gestures for Intuitve Locomotion in Virtual Reality".

PUBLICATIONS

Towards a New Interface for Music Listening: A User Experience Study on YouTube (ISMIR 2023)

- **Authors**: *Ahyeon Choi, **Eunsik Shin**, Haesun Joung, and Kyogu Lee*
- **Summary**: This study explores YouTube's unique appeal as a music platform, identifying key factors through interviews with frequent users, and proposes wireframes to improve the audio-visual music experience on streaming services.

User Defined Walking-In-Place Gestures for Intuitive Locomotion in Virtual Reality (HCII 2021)

- **Authors**: *Kim Woojoo, **Eunsik Shin**, and Shuping Xiong*
- **Summary**: This study identifies user-elicited walking-in-place (WIP) gestures for VR, finding these gestures are easier to perform, less fatiguing, and provide a more immersive experience compared to existing gestures, enhancing user experience.

RESEARCH IN PROGRESS

Hierarchical Loss for Improved Intra-Family Classification in Orchestra Instrument Embeddings

- **Authors**: ***Eunsik Shin**, Minju Kim, and Kyogu Lee*
- **Status**: Under review (ICASSP 2025)
- **Summary**: This study attempts to improve orchestral instrument classification by introducing a hierarchical loss, demonstrating better performance than contrastive loss trained model and CLAP in intra-family instrument discrimination.

Synthetic Dataset Generation for String Ensemble Separation

- **Authors**: *Minju Kim, Joonhyeon Bae, **Eunsik Shin**, and Kyogu Lee*
- **Status**: Under review (ICASSP 2025)
- **Summary**: This study tries to address the challenges of chamber ensemble source separation in string quartets, by proposing a new dataset generation approach using neural synthesis models and MusicXML files.

Song Form-Aware Full-Song Lyrics Generation with Multi-Level Granularity Syllable Count Control

- **Authors**: *Yunkee Chae, **Eunsik Shin**, Suntae Hwang, Seungryeol Paik, and Kyogu Lee*
- **Status**: Under review (AAAI 2025)
- **Summary**: This study proposes method for more granular syllable control in lyrics generation, aligning lyrics with song form and enabling control across paragraphs, lines, phrases, and words. It also includes a infilling model to ensure adherence to syllable constraints.

Enhancing Emotion Recognition in Conversations through Global Contexts: An Empirical Analysis

- **Authors**: *Eunsik Shin* & *Hyeonseok Choi, and Kyogu Lee*
- **Status**: On-going
- **Summary**: This study attempts to enhance emotion recognition in conversation by leveraging global context through an expanded Graph Neural Network structure implementation.

PROJECTS

AI Producer: Development of Customized Music Creation Technology   Mar. 2022 – Dec. 2024
Ministry of Culture, Sports and Tourism, South Korea   *Seoul, South Korea*
- Development of AI for extracting musical instrument embeddings for automatic composition programs

SCHOLARSHIP & AWARDS

Brain Korea 21 Scholarship   Feb. 2022 – Present
Seoul National University
- Scholarship for researchers at qualified research lab in South Korea.

Scholarship for academic excellence   Fall semester, 2019
Inha University
- Scholarship awarded to students with the highest academic performance in the semester.

Scholarship for academic excellence   Spring semester, 2019
Inha University
- Scholarship awarded to students with the highest academic performance in the semester.

LEADERSHIP EXPERIENCE & EXTRACURRICULAR ACTIVITIES

Local Band Guild "Inha Band"   Mar. 2019 – Feb. 2022
Team Leader
- Playing the drums for various teams in regular vacation concert.
- Regular volunteer performance participations.

Band Club Activity "Indabaesori"   Mar. 2016 – Feb. 2022
Concert Executive Director
- Playing the drums, bass, and Pan flute in the semester concert.
- Regular volunteer performance participations.

Industrial Engineering Computer Club Activity "IDECS"   Mar. 2016 – Feb. 2020
- Group study on coding. (Python, C++)
- Industrial Engineering Computer Lab hardware and software management.

CERTIFICATE & LICENSE

Test of English for International Communication (TOEIC): scored 990/990 (was valid until 19th, June, 2022)

Test of English Proficiency developed by Seoul National University (TEPS): scored 519/600 (was valid until 5th, February, 2023)

Computer Specialist in Spreadsheet & Database first tier

ADDITIONAL SKILLS

Programming: Python (pytorch, numpy, pandas, librosa, etc), Git, Docker, R, HTML, CSS

Language: Native in Korean, very fluent in English

Other Endeavors & Interests: Professional drum player & song writer (band "Navy Effect"), LP record collector

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