

# Eunsik Shin

Seoul, South Korea  
personal website

## EDUCATION

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### Seoul National University

*Ph.D Candidate in School of Intelligence and Information*

Mar. 2022 – Present

*Seoul, South Korea*

### Inha University

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

Mar. 2016 – Feb. 2022

*Incheon, South Korea*

## RESEARCH EXPERIENCE

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### Seoul National University

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

Mar. 2022 – Present

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

### Seoul National University

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

Jul. 2021 – Dec. 2021

- 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)

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

Jul. 2020 – Aug. 2020

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

## PUBLICATIONS

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### 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 (HCI 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

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### 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

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- 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

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- 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

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- 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

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- 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

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- 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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