김동민, DongMin Kim

Master's Student @ Music and Art Learning Lab, Sogang University

dmkim@sogang.ac.kr

homepage | google scholar | github | linkedIn

RESEARCH INTEREST

Music Information Retrieval, Optical Music Recognition, Neural Synthesis, Automatic Mixing

My research focuses on enabling machines to comprehend and process the diverse modalities of music. Music creation is not merely about assembling audio; it involves the intricate interplay of notation, performance, and sound design. Musicians achieve this by inscribing melodies onto scores and tweaking synthesizer knobs to shape intriguing timbres. My goal is to empower machines to understand these modalities and support musicians in their creative processes.

Currently, I am focusing on exploring Optical Music Recognition for both traditional and modern music notations, aiming to bridge the gap between musical heritage and technological advancement.

EDUCATION

- **Sogang University** — *Aug 2023 -* Seoul, South Korea
  M.S. in Artificial Intelligence (Advisor: Dasaem Jeong)

- **Sogang University** — *Feb 2014 - Feb 2020* Seoul, South Korea
  B.A.S. in Art and Technology
  ◦ GPA: 3.51/4.30
  ◦ Honors: *Magna Cum Laude*

PUBLICATIONS

- **Peer-reviewed Publication**

  ◦ Dongmin Kim, Danbinaerin Han, Dasaem Jeong, and Jose J Valero-Mas, "**On the Automatic Recognition of Jeongganbo Music Notation: Dataset and Approach**", ACM Journal on Computing and Cultural Heritage (JOCCH), 2025.

  ◦ Danbinaerin Han, Mark Gotham, Dongmin Kim, Hannah Park, Sihun Lee, and Dasaem Jeong, "**Six Dragons Fly Again: Reviving 15th-century Korean Court Music with Transformers and Novel Encoding**", in *Proc. of the 25th International Society for Music Information Retrieval Conference (ISMIR)*, 2024.

- **Workshop Papers**

  ◦ Dongmin Kim, Danbinaerin Han, Dasaem Jeong, and Jose J Valero-Mas, "**Optical Music Recognition for Jeongganbo Notation of Korean Court Music**", in *Late Breaking/Demo in the 25th International Society for Musical Information Retrieval Conference (ISMIR)*, 2024.

PROJECTS

- **Research for the Restoration of 15th Century to Jeongak. Using Artificial Intelligence** — *Sep 2023 - May 2024*
  Preprocessed Jeongganbo scorebooks to machine-readable Jeongganbo dataset []
  ◦ Implemented optical music recognition framework for Jeonggn-bo notation.

EXPERIENCE

- **Myown Company []** — *Apr 2021 - Nov 2022* Seoul, South Korea
  System Developer
  ◦ Developed AI resume analyzer
  ◦ Developed web service for job position matching
  ◦ Developed company's official web site
  ◦ Developed internal automation framework for email, notion, etc.

TEACHING EXPERIENCE

- **TA of CSE3013 "Computer Science and Engineering Laboratory I"** — *Fall 2023* Sogang University
  Programming and algorithm practice using C++

- **TA of CSEG416 "Pattern Recognition"** — *Spring 2024* Sogang University
  Introduction on pattern recognition with machine learning

HONORS AND AWARDS

- **Best Paper Award** *Nov 2024*
  25th International Society for Music Information Retrieval Conference (ISMIR) [🌐]
  - As one of the authors of "Six Dragons Fly Again: Reviving 15th-century Korean Court Music with Transformers and Novel Encoding"

- **Smilegate Scholarship for Digital Human & Entertainment trak** *Aug 2023*
  Smilegate [🌐]
  - Funding: ₩36,000,000 ($\approx$ $27,000)

LANGUAGE & SKILL & INTERESTS

- **Languages:** English(fluent), Korean(native)

- **Programming Languages:** Python, Javascript, C/C++

- **Frameworks:** PyTorch, React.js, openFrameworks

- **Interests:** Noise Music, Synthesizer, Electric Guitar, Guitar Effectors, Films, Judo

REFERENCES

1. **Dasaem Jeong**
   Professor, Art and Technology
   Sogang University
   Email: dasaemj@sogang.ac.kr
   Relationship: Thesis Advisor