

## Curriculum Vitae

# Sangeon Yong

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## Education

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| Sep. 2017 – Present   | Ph.D. program at Graduate School of Culture Technology<br>Korea Advanced Institute of Science and Technology, Daejeon, Korea                                 |
| Sep. 2015 – Aug. 2017 | Master's program at Graduate School of Culture Technology<br>Korea Advanced Institute of Science and Technology, Daejeon, Korea                              |
| Feb. 2011 – Aug. 2015 | Bachelor of Science, in Electrical Engineering<br>(Minor degree of Culture Technology)<br>Korea Advanced Institute of Science and Technology, Daejeon, Korea |

## Academic Work Experience and Internships

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| Aug. 2019 – Feb. 2020 | T-Brain, Naver Corp., Seoul, Korea<br>Research Intern <ul style="list-style-type: none"><li>- Developed high performance piano transcription system with data augmentation and model optimization with meta learning.</li></ul> |
| Jun. 2018 – Sep. 2018 | Clova Multimedia, Naver Corp., Seongnam, Korea<br>Research intern <ul style="list-style-type: none"><li>- Developed a multiple instrument classification using multi-band audio input with ShuffleNet.</li></ul>                |
| Jan. 2016 – Feb. 2016 | Keio Media Design, Yokohama, Japan<br>Student visiting program (advisor: Liwei Chan) <ul style="list-style-type: none"><li>- Developed new interface using relative touch pressure with Apple 3D Touch device.</li></ul>        |

- Jul. 2014 – Aug. 2014      Graduate School of Convergence Science and Technology  
Seoul National University, Suwon, Korea  
Internship program (advisor: Kyogu Lee)
- Developed a compressor VST plugin with four different visualizers (level meter, level display, knee display and source display) with wdl-ol library.
- Jan. 2013 – Jun. 2013      Korea Advanced Institute of Science and Technology  
Undergraduate research program (advisor: Woon Seung Yeo)
- Developed a musical interface controlled by human voice with Max/MSP.

## International Conference Proceedings

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Korean Singing Voice Synthesis Based on Auto-Regressive Boundary Equilibrium GAN  
Soonbeom Choi, Wonil Kim, Saebyul Park, **Sangeon Yong**, Juhan Nam  
*Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2020*

Singing Expression Transfer from One Voice to Another for a Given Song  
**Sangeon Yong**, Juhan Nam  
*Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2018*

Use the Force: Incorporating Touch Force Sensors into Mobile Music Interaction  
Edward Jangwon Lee, **Sangeon Yong**, Soonbeom Choi, Roshan Peiris, Liwei Chan, Juhan Nam  
*Proceedings of the 13th International Symposium on Computer Music Multidisciplinary Research (CMMR), 2017*

ForceClicks: Enabling Efficient Button Interaction with Single Finger Touch  
**Sangeon Yong**, Edward Jangwon Lee, Roshan Peiris, Liwei Chan, Juhan Nam  
*Proceedings of the 11th International Conference on Tangible, Embedded, and Embodied Interaction (TEI), 2017*

## International Workshops and Challenges

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PyTSMoD: A Python Implementation of Time-Scale Modification Algorithm  
**Sangeon Yong**, Soonbeom Choi, Juhan Nam  
*Late Breaking Demo in the 21st International Society for Music Information Retrieval Conference (ISMIR), 2020*

Data Augmentation and Model Optimization for Piano Transcription

**Sangeon Yong**, Changhyun Kim, Jiwon Kim

*Music Information Retrieval Evaluation eXchange (MIREX) in the 20th International Society for Music Information Retrieval Conference (ISMIR), 2019*

## International Journals

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Use the Force: Incorporating Touch Force Sensors into Mobile Music Interaction

Edward Jangwon Lee, **Sangeon Yong**, Soonbeom Choi, Liwei Chan, Roshan Peiris, Juhan Nam

*Lecture Notes in Computer Science (revised selected papers of CMMR 2017), Vol. 11265, 2018*

## Thesis

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Transferring Singing Expressions from One Voice to Another

**Sangeon Yong**

*M.S. thesis, KAIST, 2017*

## Patents

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Singing Expression Transplantation System

Juhan Nam, **Sangeon Yong**

*US Patent Application, 16326649, 2019*

Voice Timbre Conversion System and Method from the Professional Singer to User in Music Recording

Juhan Nam, **Sangeon Yong**

*Korea Patent Application, 10-2018-0151531, 2018*

Singing Voice Expression Transfer System

Juhan Nam, **Sangeon Yong**

*Korea Patent Grant, 10-1925217, 2018*

## Domestic Conference Proceedings

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Singing Voice Expression Transfer System with Popular Music Recordings

(가창 음원의 음악적 표현 이식 시스템)

**Sangeon Yong**, Juhan Nam

*Proceedings of the Korean Society of Speech Sciences (KSSS), 2019 spring*

## Research Projects

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Jul. 2020 – Dec. 2020    T-Brain X, SK Telecom

- Project: Development of Multi-Singer Synthesis and Modification Algorithm

- Jul. 2017 – Dec. 2020    Ministry of Trade, industry and Energy
- Project: Development of conversational speech synthesis technology to express emotion and personality of robots through sound source diversification
- July. 2016 – Dec. 2018    Korea Creative Content Agency (KOCCA)
- Project: Development of Pattern, Phrase, Motif Based Korean Virtual Instruments

## Awards

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Korean Society of Speech Sciences (KSSS) Spring Conference Best Paper Award (2019)  
Spring Semester URP Program Second Prize (2013)

## Teaching Experience

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- Spring, 2019            Teaching Assistant, Graduate School of Culture Technology, KAIST
- Musical Applications of Machine Learning (graduate level course)  
Prof. Juhan Nam
- Fall, 2018             Teaching Assistant, Graduate School of Culture Technology, KAIST
- Museum Technology in Digital Era (graduate level course)  
Prof. Jaehong Ahn
- Fall, 2017             Teaching Assistant, Graduate School of Culture Technology, KAIST
- Knowledge-based System Design (graduate level course)  
Prof. Ji-Hyun Lee
- Fall, 2016             Teaching Assistant, Graduate School of Culture Technology, KAIST
- Introduction to Culture Technology (undergraduate course)  
Prof. Wonjae Lee and Juhan Nam

## Research Interests

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Music signal processing (modification and synthesis)  
Singing voice modification and synthesis  
Human-computer interaction, especially for musical interface

## References

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Juhan Nam  
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