JooYeong Kim
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[Research Projects](#) 🔍
[Scholar](#) 🎓 [GitHub](#) 🐙

RESEARCH INTERESTS

My research focuses on human-centered AI interaction systems that enhance usability and accessibility. I identify the problems people encounter and design and develop systems to support them effectively. I enjoy leveraging recent AI technology in my systems and exploring how AI can practically support human problems. I evaluate user experiences both quantitatively and qualitatively, and seek ways to improve the systems.

HCI & AI, Accessibility, Sound Visualization, Language Model, User Modeling

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EDUCATION

Gwangju Institute of Science of Technology (GIST) — Gwangju, Korea
M.S./Ph.D. in School of Integrated Technology — Feb. 2019 – Present
Advisor: Jin-Hyuk Hong
GPA: 4.07 / 4.5

Hongik University — Seoul, Korea
B.S. in Computer Engineering — Mar. 2014 – 2019
GPA: 4.08 / 4.5

PUBLICATIONS

Conference Papers

[c.2] Visible Nuances: A Caption System to Visualize Paralinguistic Speech Cues for Deaf and Hard-of-Hearing Individuals.
JooYeong Kim*, Sooyeon Ahn*, Jin-Hyuk Hong. (*contributed equally)
CHI 2023: ACM Conference on Human Factors in Computing Systems. (acceptance rate: 27.6%)

[c.1] We Play and Learn Rhythmically: Gesture-based Rhythm Game for Children with Intellectual Developmental Disabilities to Learn Manual Sign.
Youjin Choi*, **JooYeong Kim***, ChanWoo Park, JeongYoun Kim, Ji Hyun Yi, Jin-Hyuk Hong. (*contributed equally)
CHI 2022: ACM Conference on Human Factors in Computing Systems. (acceptance rate: 24.7%)

Journal Papers

[j.3] Visualizing Speech Styles in Captions for Deaf and Hard-of-Hearing Viewers
Sooyeon Ahn*, **JooYeong Kim***, Choonsung Shin, Jin-Hyuk Hong. (*contributed equally)
International Journal of Human-Computer Studies, 2024. (accepted)

[j.2] Interactive Description to Enhance Accessibility and Experience of Deaf and Hard-of-Hearing Individuals in Museums.
JooYeong Kim, ChungHa Lee, JuYeon Kim, Jin-Hyuk Hong.
Universal Access in the Information Society, 2023.

[j.1] Immersion Measurement in Watching Videos Using Eye-tracking Data.
Youjin Choi*, **JooYeong Kim***, Jin-Hyuk Hong. (*contributed equally)
IEEE Transaction on Affective Computing, 2022.

Posters Papers

[p.4] Understanding of Ceramic Image Classification based on Deep Learning.
DaeHo Lee, In-Taek Jung, JunDoo Choi, **JooYeong Kim**, JuYeon Kim, Jin-Hyuk Hong.
KSC 2021: Korea Software Congress.

[p.3] Gesture-based Rhythm Game for Learning Sign Language of Children with Severe
Developmental Disabilities.
JooYeong Kim, Youjin Choi, In-Taek Jung, JiHyun Yi, Jeongyeon Kim, Jin-Hyuk Hong.
KSAAC 2020: Korea Society for Augmentative and Alternative Communication.

[p.2] Communication Education System Based on Gesture Recognition for Children with Severe
Developmental Disabilities.
Intaek Jung, Youjin Choi, **JooYeong Kim**, Jeongyoun Kim, Jin-Hyuk Hong.
KSC 2020: Korea Software Congress.

[p.1] A Comparative Study on the Performance of Speech Recognition for a Speech Interface in a
Filming Environment.
Sanghun Jeon, Youjin Choi, **JooYeong Kim**, Albert Deokyoung Yang, Mun Sang Kim, Jin-Hyuk
Hong.
KCC 2019: Korea Computer Congress.

Archived Manuscripts (Under Review)

[-] OnomaCap: Making Non-speech Sound Captions Accessible and Enjoyable through Onomatopoeic
Sound Representation
JooYeong Kim, Jin-Hyuk Hong.
Submitted Sep 2024.

[-] Voice-Visualized Message Interactions on Smartwatches
JooYeong Kim, Sooyeon Ahn, Jin-Hyuk Hong.
Submitted Sep 2024.

[-] CuCap: Comparative Analysis of Customized Captioning between North American and South
Korean d/Deaf and Hard-of-Hearing Users
Calua de Lacerda Pataca, SooYeon Ahn, Suhyeon Yoo, **JooYeong Kim**, Khai N. Truong, Jin-
Hyuk Hong, Roshan L Peiris, Matt Huenerfauth.
Submitted Sep 2024.

[-] Pre-AttentiveGaze: Gaze-based Authentication Dataset with Momentary Visual Interactions
Junryeol Jeon, Yeo-Gyeong Noh, **JooYeong Kim**, Jin-Hyuk Hong.
Submitted May 2024.

HONORS & AWARDS

Inseong Hong bok-soon Scholarship   Nov. 2022
Scholarship for Women in Science and Technology, GIST (one of twelve)

Hongik University Scholarship   Mar. 2015 – Sep. 2018
Merit-based scholarships for 5 semesters

PATENTS

Measuring apparatus and method for visualize voice information.
Jin-Hyuk Hong, **JooYeong Kim**, Sooyeon Ahn
Korea Patent Pending No. 10-2023-0101066 (Aug. 2023)

Method and apparatus for measuring degree of immersion for driver or contents viewer.
Jin-Hyuk Hong, **JooYeong Kim**, Youjin Choi
Korea Patent Registration No. KR102419860B1 (Jul. 2022)

RESEARCH PROJECTS

Convergence culture virtual studio for realizing artificial intelligence-based metaverse.
Research Project supported by *Ministry of Science and ICT*   Apr. 2022 – Dec. 2023

Development of Intelligent Exhibition Commentary Platforms for Deaf - Korean Sign Language/Word Translation Systems.
Research Project supported by *Korea Creative Content Agency*   Nov. 2020 – Dec. 2022

Development of content creation and entertainment technologies based on intelligent authoring tool to enhance accessibility of social communication disabilities.
Research Project supported by *Korea Creative Content Agency*   Mar. 2020 – Dec. 2020

TEACHIING EXPERIENCE

Designing Artificial Intelligence for Culture Technology Applications   Spring 2022
Teaching Assistant, CT4302-01, Instructor: Jin-Hyuk Hong
- Presented the latest trends in natural language processing for cultural technology and taught coding exercises on basic natural language processing procedures for text generation.

Intelligent Agent   Fall 2020
Teaching Assistant, CT5304 & AI6310, Instructor: Jin-Hyuk Hong
- Developed coding exercises for chapters, created and presented recorded videos of tutorials, and participated in the evaluation of exercises and exams.

ACADEMIC SERVICE

Technical Paper Reviewer – CHI 2024, CHI 2025

TALKS & PANELS

HCI KOREA 2024 Invited Papers Session   Jan 2024
from 2023 SIGCHI-sponsored Top Conferences

ADDITIONAL SKILLS

Python, PyTorch, JavaScript, Vue, Flask, C++, C, C#, R, Java, Android, Unity