

# JooYeong Kim

PhD candidate

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[Research Projects](#) 

[Scholar](#)  [GitHub](#) 

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## 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.

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## EDUCATION

### Gwangju Institute of Science of Technology (GIST)

M.S./Ph.D. in School of Integrated Technology

Advisor: Jin-Hyuk Hong

GPA: 4.07 / 4.5

Gwangju, Korea

Feb. 2019 – Feb. 2025

### Hongik University

B.S. in Computer Engineering

GPA: 4.08 / 4.5

Seoul, Korea

Mar. 2014 – 2019

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## PUBLICATIONS

### Conference Papers

[c.3] OnomaCap: Making Non-speech Sound Captions Accessible and Enjoyable through

Onomatopoeic Sound Representation

**JooYeong Kim**, Jin-Hyuk Hong.

*CHI 2025: ACM Conference on Human Factors in Computing Systems.* (acceptance rate: 25.1%)

[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*, 2025

- [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.6] A Study of Non-speech Sound Recognition using Onomatopoeic Representations.

**JooYeong Kim**, Jin-Hyuk Hong.  
*KSC 2024: Korea Software Congress*.

- [p.5] A Study of Sound Balloon Generation System using Multimodal ChatGPT for Sound Accessibility

**JooYeong Kim**, Jin-Hyuk Hong.  
*KSC 2024: Korea Software Congress*.

- [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)

- [-] Voice-Visualized Message Interactions on Smartwatches

**JooYeong Kim**, Sooyeon Ahn, YoonJae Kim, 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*.

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## HONORS & AWARDS

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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

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## PATENTS

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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)

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## RESEARCH PROJECTS

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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

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## TEACHING EXPERIENCE

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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.

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## ACADEMIC SERVICE

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Technical Paper Reviewer – CHI 2024, CHI 2025

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## TALKS & PANELS

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HCI KOREA 2024 Invited Papers Session Jan 2024

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from 2023 SIGCHI-sponsored Top Conferences

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**ADDITIONAL SKILLS**

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