Curriculum Vitae

JooYeong Kim, Ph.D.

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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 – Feb. 2025
Advisor: Jin-Hyuk Hong
GPA: 4.07 / 4.5
Dissertation: Automated Sound-Visualized Caption System to Enhance Accessibility
for Deaf and Hard-of-Hearing Users: Focus on Speech and Non-Speech Sound Nuances

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

PUBLICATIONS

Conference Papers

[C3] 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%)

[C2] 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%)

[C1] 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

[J4] Pre-AttentiveGaze: Gaze-based Authentication Dataset with Momentary Visual Interactions
Junryeol Jeon, Yeo-Gyeong Noh, JooYeong Kim, Jin-Hyuk Hong.
Scientific Data, vol. 12 (1), pp. 263 (2025)

[J3] 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, vol. 194, (2025)

[J2] 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, vol. 23, pp. 913–926, (2023)

[J1] Immersion Measurement in Watching Videos Using Eye-tracking Data
Youjin Choi*, JooYeong Kim*, Jin-Hyuk Hong. (*contributed equally)
IEEE Transaction on Affective Computing, vol. 13 (4), pp. 1759-1770, (2022)

Posters Papers

[P6] A Study of Non-speech Sound Recognition using Onomatopoeic Representations.
JooYeong Kim, Jin-Hyuk Hong
KSC 2024: Korea Software Congress

[P5] A Study of Sound Balloon Generation System using Multimodal ChatGPT for Sound Accessibility
    JooYeong Kim, Jin-Hyuk Hong
    KSC 2024: Korea Software Congress

[P4] 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

[P3] 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

[P2] 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

[P1] 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.

[–] 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

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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

Sound-Visualized Captions: Making Sound Nuance Accessible using AI   *NAVER*
Invited Tech Talk   Feb 2025

Visible Nuances   *HCI KOREA*
HCI KOREA 2024 Invited Papers Session (2023 SIGCHI-sponsored Top Conferences)   Jan 2024

SKILLS

HCI Research Methods – Experimental Design, User Interview, Focus Group Interview, Survey & Questionnaire, Usability Testing, Eye-Tracking Study, In-Lab/Field/Deployment Study, Prototyping, Design Workshop, Quantitative Analysis, Qualitative Analysis, Thematic Analysis, Statistical Analysis

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