Kyungyeon Lee

Ph.D. Student, Department of Computer Science
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Google Scholar

Education

† *Indicates expected*

2021–2027 † Ph.D., Computer Science, University of Maryland, College Park
Advisor: Jun Nishida

2016-2021 B.Sc., Computer Science, Ewha Womans University, Seoul, South Korea
Advisor: Uran Oh

Research Interests

Human-Computer Interaction (HCI), Accessibility, Extended Reality, Human-Centered Computing

Publications

[1] **Personal Health Data Tracking by Blind and Low-Vision People: Survey Study**
Jarrett G.W. Lee, Kyungyeon Lee, Bongshin Lee, Soyoung Choi, JooYoung Seo, Eun Kyoung Choe
Journal of Medical Internet Research, 25, e43917. (2023).
Link: Paper

[2] **Understanding the Two-Step Nonvisual Omnidirectional Guidance for Target Acquisition in 3D spaces**
SeungA Chung, Kyungyeon Lee, Uran Oh
In 2021 IEEE International Symposium on Mixed and Augmented Reality (ISMAR) (pp. 339-346). IEEE.
Link: Paper

[3] **Designing Product Descriptions for Supporting Independent Grocery Shopping of People with Visual Impairments**
Kyungyeon Lee*, Sohyeon Park*, Uran Oh
In Extended Abstracts of the 2021 CHI Conference on Human Factors in Computing Systems (pp. 1-6).
Link: Paper, Video

[4] **Improving Mealtime Experiences of People with Visual Impairments**
SeungA Chung, Soobin Park, Sohyeon Park, Kyungyeon Lee, Uran Oh
In Proceedings of the 18th International Web for All Conference (pp. 1-11). (2021).
Best Technical Paper Nomination
Link: Paper

[5] **Three-dimensional Nonvisual Directional Guidance for People with Visual Impairments**
SeungA Chung, Kyungyeon Lee, Sohyeon Park, Uran Oh
In 2021 IEEE International Conference on Pervasive Computing and Communications Workshops and other Affiliated Events (PerCom Workshops) (pp. 81-86). IEEE.
Link: Paper

[6] **OverIT: An Interactive Overlay for Touchscreen-based UI Customization with a Programming by Demonstration**
Kyungyeon Lee, SeungA Chung, Uran Oh
The International Journal of Advanced Smart Convergence, 10(3), 143-148. (2021).
Link: Paper

[7] **Investigating three-dimensional directional guidance with nonvisual feedback for target pointing task**
SeungA Chung, Kyungyeon Lee, Uran Oh
In 2020 IEEE International Symposium on Mixed and Augmented Reality Adjunct (ISMAR-Adjunct) (pp. 206-210). IEEE.
Link: Paper

[8] **Understanding Interactive and Explainable Feedback for Supporting Non-Experts with Data Preparation for Building a Deep Learning Model**
Yeonji Kim*, Kyungyeon Lee*, Uran Oh
The International Journal of Advanced Smart Convergence, 9(2), 90-104. (2020).
Link: Paper

Research

University of Maryland, Research Assistant June 2023 - Present
Advised by Dr. Jun Nishida

- Exploring effective intervention methods provided by various modalities and devices (e.g., tactile, haptic, somatosensory) to investigate the sensory stimulation that can effectively help users avoid repetitive behaviors (e.g., nail-biting)

University of Maryland, Research Assistant Sep 2021 - Jan 2023
Advised by Dr. Eun Kyoung Choe

- Conducted a survey to understand how blind and low-vision people engage in health activities, and how they collect and use their data about their health [1]
- Built an annotation app for stroke patients that is a multi-modal self-tracking application [demo]
- Developed an android application for tracking stroke survivors' finger individuation task [demo]

Ewha Womans University, Research Assistant Jan 2019 - July 2021
Advised by Dr. Uran Oh

- Participated in multiple research projects focused on accessibility for people with visual impairment and developed extended reality systems aimed at improving their daily lives [3-5]
- Conducted research on non-visual feedback in virtual reality [2, 5, 7]

Teaching

Web Application Development with JavaScript, Spring 2023-Present
University of Maryland
Single Page Web Application Development With JavaScript, Fall 2021
University of Maryland
Computational Thinking and Problem Solving, Spring 2020
Ewha Womans University

Employment

IBM Korea, *Undergraduate Mentee* Jul 2018 - Jan 2019

- Designed and implemented Achat, a schedule management system that systematically manages users' schedules, which won the IBM CEO Award and was presented as a poster at Hanium 2018 [demo]

CyberLogitec, *Research Intern* Oct 2020 - Jan 2021

- Constructed additional health care data and conducted preprocessing of DICOM metadata to train an AI model for cancer diagnosis

Innertainment, *Software Engineer* Mar 2020 - Jun 2020

- Developed content recommendation system using TF-IDF and word2vec

Freelancer, *Software Engineer and Designer* Mar 2016 - Oct 2021

- Developed and designed multiple mobile and web applications

Honors and Awards

Dean's Fellowship, University of Maryland 2022

Best Technical Paper Nomination, Web4All 2021 2021

Student Independent Research Competition (Ranked Second), ITRC Korea 2020

Student Research Grant, ITRC Korea 2020

Dean's Fellowship, Ewha Womans University 2019

Graduation Project (Ranked first in Research Track), Ewha Womans University 2019

Future Capability Development Scholarship, Ewha Womans University 2019

IBM CEO Award: Best Project, IBM Korea 2018

Finalist of Hanium Constest, Ministry of Science and ICT 2018

Tech Idea Hackathon Prime Pitch Day (Ranked Third), Ewha Womans University 2018

Academic Scholarship, Ministry of National Defense 2017

Competences

- **Programming**: Java, Android (Java, Kotlin, React Native), C/C++, Unity (C#), Python, PHP, HTML, CSS, Javascript, React, SQL
- **Designing**: Adobe illustration, Figma, Fusion 360 (3D modeling)

Service

Student Volunteer

- HCI Korea 2021
- CHI 2021
- ISMAR 2020

Reviewer

- ISMAR 2023
- ISMAR 2024