SeungA Chung

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EDUCATION

Ewha Womans University — Seoul, South Korea
Ph.D. of Science in Artificial Intelligence and Software — *03/2022–Present*
- Advisor: Dr. Uran Oh.
- GPA: 4.15/4.3.

Ewha Womans University — Seoul, South Korea
Master of Science in Artificial Intelligence and Software — *03/2020–02/2022*
- Advisor: Dr. Uran Oh.
- GPA: 4.26/4.3.
- Thesis: Omnidirectional Feedback System in VR for People With Visual Impairments [pdf]

Ewha Womans University — Seoul, South Korea
Bachelor of Science in Computer Science and Engineering — *03/2016–02/2020*
- GPA: 3.89/4.3. *Magna Cum Laude*

HONORS AND SCHOLARSHIPS

- **Ewha Boeing Scholarship**, Ewha Womans University — 2024
- **Half-Tuition Admission Scholarship**, Ewha Womans University — 2020, 2022
- **Best Technical Paper Nomination**, Web4All — 2021
- **Student Research Grant**, Information Technology Research Center — 2020
- **KiHo Lee Scholarship**, Ewha Womans University — 2020
- **Dean's List**, Ewha Womans University — Spring 2016, 2018–Spring 2019
- **Honors Scholarship**, Ewha Womans University — Fall 2016, Fall 2019
- **Future Capability Development Scholarship**, Ewha Womans University — 2019
- **Computer Science Leadership Scholarship**, Ewha Womans University — 2016

PUBLICATIONS

[1] **SeungA Chung**, João Guerreiro, André Rodrigues, Uran Oh. Designing A VR-based Accessible Speed Of Light Exergame for People with Visual Impairments *International Symposium on Mixed and Augmented Reality, 2024 Poster.* [pdf]

[2] João Guerreiro, Yujin Kim, Rodrigo Nogueira, **SeungA Chung**, André Rodrigues, Uran Oh. The Design Space of the Auditory Representation of Objects and Their Behaviours in Virtual Reality for Blind People. *IEEE Transactions on Visualization and Computer Graphics, 2023.* [pdf]

[3] **SeungA Chung**, Kyungyeon Lee, Uran Oh. Understanding the Two-Step Nonvisual Omnidirectional Guidance for Target Acquisition in 3D Spaces. *International Symposium on Mixed and Augmented Reality, 2021. (Acceptance Rate: 23.6%)* [pdf] [video]

[4] **SeungA Chung**, Hwayeon Joh, Eunji Lee, Uran Oh. PanoCue: An Efficient Visual Cue With a Omnidirectional Panoramic View for Finding a Target in 3D Space. *International Symposium on Mixed and Augmented Reality, 2021 Poster.* [pdf]

[5] Kyungyeon Lee, **SeungA Chung**, Uran Oh. OverIT: An Interactive Overlay for Touchscreen-based UI Customization with a Programming by Demonstration. *International Journal of Advanced Smart Convergence, 2021.* [pdf] [demo]

[6] **SeungA Chung***, Soobin Park*, Sohyeon Park, Kyungyeon Lee, Uran Oh. Improving Mealtime Expeirence of People with Visual Impairments. *International Web for All Conference, 2021. Best Technical Paper Nomination.* [pdf] [appendix] [demo1] [demo2]

[7] **SeungA Chung**, Kyungyeon Lee, Sohyeon Park, Uran Oh. Three-dimensional Nonvisual Directional Guidance for People with Visual Impairments. *Workshop on Mobile and Pervasive Assistive Technologies, 2021* [pdf] [video]

[8] **SeungA Chung**, Kyungyeon Lee, Uran Oh. Investigating Three-dimensional Directional Guidance with Nonvisual Feedback for Target Pointing Task. *International Symposium on Mixed and Augmented Reality, 2020 Poster.* [pdf] [teaser]

[9] **SeungA Chung**, Uran Oh. Exploring the Design Space of an Augmented Display for Conveying Facial Expressions for People with Autism. *Workshop on Mixed Reality and Accessibility, 2019.* [pdf]

EXPERIENCES

Research Assistant Ewha HCI Lab, Ewha Womans University
Advisor: Prof. Uran Oh *02/2019 – Present*

- Investigated various feedback designs for target acquisition in 3D space by implementing target pointing task in virtual reality environment.
  - Nonvisual feedback designs: Conducted a user study under 6 different feedback with blind-folded people [6] and PVI [5] to understand effect of non-visual feedback in 3D space. Played a role as a poster presenter on *ISMAR 2020* and workshop presenter on *MPAT 2021*. Also, proposed two step guidance using nonvisual feedback by reflecting the previous studies [1]. Presented the paper on *ISMAR 2021*.
  - Visual feedback designs: Proposed $PanoCue$ system which overlays a panorama view of the surrounding environment and conducted a user study to evaluate the performance and compare with other visual cues [2]. Also, presented the poster on *ISMAR 2021*.
- Explored meal-related difficulties that PVI experience when they dining out through qualitative study. Investigated implications of system design which assists meal by developing prototype in virtual environment and conducted a user study to evaluate its usability [4].
- Developed programming-by-demonstration system called $OverIT$ for improving user experience of one-handed interaction by allowing them to customize touch screen interface [3].
- Investigated method of conveying emotions through augmented display for people with autism spectrum disorder by developing CNN based facial expressions recognition model [7]. Also, played a role as a workshop presenter on *ISMAR 2019*.

Teaching Assistant

CS35913: Human-Computer Interaction *Spring 2020, Spring 2021, Fall 2022*
- Covered variable technologies related on human-computer interaction and graded students' assignments and final project.

CS36510: Virtual Reality *Spring 2022, Spring 2023*
- Covered variable technologies related on virtual reality (especially Unity) in Q&A sessions and graded students' assignments.

CS20480: Artificial Intelligence *Spring 2024*
- Instructed basic AI theory and technology in Q&A sessions and graded students' assignments and examinations.

CS11361: Computational Thinking for Computer Programming *Fall 2020*
- Instructed basic Python programming in Q&A sessions and graded students' examinations.

Student Volunteer

HCI Korea 2021, ISMAR 2021, ASSETS 2021, CHI 2022, UIST 2025(Co-Chair)

PROJECTS

G16703: Smart Computing [demo] Spring 2021
- Developed an application with the calendar and memo functions by using React Native.

G14547: Data Analysis [pdf] Fall 2020
- Implemented and improved a real-time facial expression recognition system based on a CNN model.

G17650: Deep Learning for Medical Image Processing [pdf] Spring 2020
- Investigated deep learning models for better performance in real-time object recognition.

- Implemented a real-time food recognition system based on a YOLO and Faster RCNN model.

SKILLS

Techniques
Python, C, C#, Java, Unity, PHP, SQL, React Native

Languages
Korean (native), English (advanced)