Sohyeon Park

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Interests

Human-Computer Interaction, Human-Centered Computing, Accessibility, Extended Reality

Education

University of California, Irvine Sep 2022 - Present
- Ph.D. in Informatics (*Advisor: Dr. Stacy Branham*)

Ewha Womans University Mar 2016 - Feb 2021
- B.S. in Computer Science and Engineering, *Magna cum laude*
- Cumulative GPA: 3.82 / 4.30 (94.7%)

Publications

[1] **Sohyeon Park*** *(Main Presenter)*, Kyungyeon Lee*, Uran Oh. (2021) Designing Product Descriptions for Supporting Independent Grocery Shopping of People with Visual Impairments. In *Extended Abstracts of the 2021 CHI Conference on Human Factors in Computing Systems* [pdf] [presentation video]

[2] Soobin Park*, SeungA Chung*, **Sohyeon Park**, Kyungyeon Lee, Uran Oh. (2021) Improving Mealtime Experiences of People with Visual Impairments. In *Proceedings of the 18th International Web for All Conference* "Best Technical Paper" Nomination [pdf]

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

Preprints & Manuscripts

[4] Hwayeon Joh, **Sohyeon Park**, Yunjeong Lee, Uran Oh. Investigating Hand Gestures of People with Visual Impairments for Zoomable Image Searching Task in a Mobile Device. *In preparation for: The 24th International ACM SIGACCESS Conference on Computers and Accessibility*

Research Experience

Research Assistant, Ewha Human-Computer Interaction Lab Jun 2020 - Aug 2022
Supervised by Dr. Uran Oh
- Conducting research in human-computer interaction, accessibility, and extended reality (XR) in order to improve the assistance for marginalized people and improve the application of XR. This includes application areas in aiding visually impaired individuals ([1,2,3]), search behavior in virtual environments ([1,2]), and education ([5]).

Research Assistant, Ewha Computer Vision Lab Feb 2019 - Dec 2019
Supervised by Dr. Dongbo Min
- Worked on creating a novel unsupervised deep learning model using Siamese Network and image warping to remove aliasing patterns in a screen captured image.

Selected Projects

Virtual Science Lab, Ewha Human-Computer Interaction Lab Jun 2020 - Aug 2022
- Currently implementing a virtual science lab to provide an effective learning aid for students and support their remote and collaborative science experiments.
- A national project funded by the Ministry of Education.

Understanding the Effects of Physical Interaction Types and Distance on the Performance of Target Selection Task, Ewha Human-Computer Interaction Lab Mar 2021 - Aug 2021
- Conducted behavioral log analysis to understand users' behavior and performance when selecting a target that varies in distance with hand- and body-based interaction in a mixed reality environment.

Mixed Reality Newspaper [demo1] [demo2] Fall 2020
G17618 Special Topics in Human-Computer Interaction (Audit)
- Implemented a MR newspaper using Microsoft Hololens1 in order to provide newspapers for seniors who find reading digital news difficult and to lessen environment pollution.

- Combined the positive features of physical and digital newspapers to provide a friendly digitized newspaper for all ages of people.

Capstone Design (Graduation) Project [pdf] Spring & Fall 2019
Supervised by: Dr. Dongbo Min
- Created an unsupervised deep learning model to remove aliasing patterns that occur when taking pictures of computer monitors using mobile devices.
- Published a short paper on the Ewha academic journal.

Virtual Escape Room [demo] Fall 2019
CS36510 Virtual Reality and Interaction Techniques
- Designed and developed a VR-based system, using Google Cardboard and Unity, where the user needs to escape a warehouse filled with toxin by solving puzzles in a limited time.

Work Experience

AI Research Intern, Medicisoft Mar 2020 - Aug 2020
- Designed and implemented a prediction model to predict the number of people from foreign countries that will be diagnosed with COVID-19.
- Developed and tested an AI recommendation system for suggesting personalized education modules in online math education platforms for the Ministry of Education in South Korea.
- Led a partnership contract with Megvii, an international AI related company in China.

QA Trainee, Ahnlab Aug 2018 - Feb 2019
- Performed quality assurance testing on multiple operating systems such as Windows, Linux, and Unix before introducing the new version of V3 products.
- Participated in developing a QA automation system using Python.

Software Engineering Intern, LUXROBO Jul 2017 - Aug 2017
- Invented and implemented various coding games for children that can be played with the company's product (MODI) using C.

Student Volunteer

ACM SIGACCESS Conference on Computers and Accessibility Oct 2021

Human Computer Interaction Korea Jan 2021

ACM Interactive Surfaces and Spaces Conference Nov 2020

Honors & Awards

Kiho Lee Scholarship (Academic Excellence Scholarship), Ewha Womans University 2021

Best Technical Paper Nomination, The 18th International Web for All Conference 2021

Outstanding Ewha Scientist Scholarship, Ewha Womans University Spring & Fall 2021

Future Capability Development Scholarship, Ewha Womans University 2020

Student Independent Research Competition 2nd Prize, Information Technology Research Center 2020

Student Research Grant, Information Technology Research Center 2020

Outstanding Employee CEO Award, Medicisoft 2020

Dean's List, Ewha Womans University Spring 2017, Spring 2018, Spring & Fall 2019

Teaching Experience

Teaching Assistant, Ewha Womans University Mar 2021 - Jun 2021
CS10556 Fourth Industrial Revolution and Creative Convergence
- Instructor: Dr. Jaehee Yang, Dr. Hwanseung Yong
- Tutored basic Python and HTML programming for students.

Skills

Languages
- Korean (*native*), English (*proficient*)

Techniques Unity, Pytorch, Tensorflow, JAVA, C/C++, Python, HTML, CSS, Javascript, React Native