

# Kyungyeon Lee

kylee@umd.edu | kyungyeon-lee.github.io

EDUCATION	<p><b>University of Maryland, College Park, MD, USA</b></p> <ul style="list-style-type: none"><li>• Department of Computer Science</li><li>• Advisor: Dr. Eun Kyoung Choe</li></ul> <p><b>Ewha Womans University, Seoul, South Korea</b> 03/2016 - 03/2021</p> <ul style="list-style-type: none"><li>• Bachelor of Science in Computer Science and Engineering</li><li>• Advisor: Dr. Uran Oh</li></ul>
INTERESTS	Human-Computer Interaction, Human-Centered Computing, Accessibility, Extended Reality
PUBLICATIONS	<p>[1] <b>Kyungyeon Lee*</b>, Yeonji Kim*, Uran Oh. Understanding Interactive and Explainable Feedback for Supporting Non-Experts with Data Preparation for Building a Deep Learning Model. <i>International Journal of Advanced Smart Convergence</i> 2020. [pdf]</p> <p>[2] SeungA Chung, <b>Kyungyeon Lee</b>, Uran Oh. Investigating Three-dimensional Directional Guidance With Non-visual Feedback with Target Searching Task. <i>International Symposium on Mixed and Augmented Reality 2020 Poster</i>. [pdf] [demo]</p> <p>[3] SeungA Chung, <b>Kyungyeon Lee</b>, Sohyeon Park, Uran Oh. Investigating Three-dimensional Directional Guidance With Nonvisual Feedback with Target Searching Task. <i>Workshop on Mobile and Pervasive Assistive Technologies 2021</i>. [pdf]</p> <p>[4] <b>Kyungyeon Lee</b>, Sohyeon Park, Uran Oh. Assistant Model Design Based on Challenges PVI Experience during Offline Grocery Shopping. <i>Late-Breaking Work, Conference on Human Factors in Computing Systems 2021</i>. [pdf]</p> <p>[5] Soobin Park, SeungA Chung, Sohyeon Park, <b>Kyungyeon Lee</b>, Uran Oh. Improving Mealtime Experiences of People with Visual Impairments. <i>Web4All 2021. Best Technical Paper Nomination</i> [pdf]</p>
PREPRINTS & MANUSCRIPTS	<p>[6] <b>Kyungyeon Lee</b>, SeungA Chung, Uran Oh. OverIT: An Interactive Overlay for Touchscreen-based UI Customization with a Programming by Demonstration. In preparation for a submission to <i>Web4All 2021</i>. [pdf] [demo]</p> <p>[7] Sohyeon Park, <b>Kyungyeon Lee</b>, Uran Oh. Analysing the Visual Search Behavior Between Mixed Reality and Mobile Device. In preparation for a submission to <i>International Symposium on Mixed and Augmented Reality 2021</i>.</p>
EXPERIENCES	<p><b>Research Assistant, Ewha HCI Lab</b> 01/2019 - present Supervised by Prof. Uran Oh</p> <ul style="list-style-type: none"><li>• Developed a machine learning data preparation tool with interactive and explainable features and analyzed the effects of each feature on the general person's understanding of machine learning [1].</li><li>• Developed OverIT, a programming-by-demonstration system that enables users to customize interfaces to improve the user experience of one-handed interaction with touchscreen devices [6].</li><li>• Participated in various projects studying the accessibility for people with visual impairment (PVI) and improving the quality of their lives using extended reality.<ul style="list-style-type: none"><li>– Project 1: Conducted a study under 6 different feedback designs to understand the effects of various nonvisual feedback for 3D directional guidance [2], [3]. Also, presented the poster on <i>ISMAR 2020</i>.</li><li>– Project 2: Investigated the difficulties that PVI experience when shopping groceries offline such as in department stores or wholesale marts, and conceptualized/implemented the optimal assistant model with mixed reality [4].</li><li>– Project 3: Conducted a qualitative study to understand the eating experiences and difficulties of PVI [5].</li></ul></li></ul> <p><b>Teaching Assistant, CS11205 Computational Thinking and Problem Solving</b> 03/2020 - 07/2020</p> <ul style="list-style-type: none"><li>• Covered basic Python programming and basic algorithm.</li><li>• Ran Q&amp;A sessions every twice a week with over 70 students and graded their assignments.</li></ul>

**Undergraduate Mentee, IBM Korea**

07/2018 - 01/2019

Supervised by SG Lee and Anna Choi

- Designed and implemented Achat which helps to manage users' collaboration more systematically.
- Won IBM CEO Award in Hanium contest and gave a poster presentation on Hanium 2018 [\[demo\]](#).
- Performed as a lead programmer: developed an Android application, real-time socket program, and Raspberry Pi based smart system.

**Student Volunteer, ISMAR 2020, HCI Korea 2021, CHI 2021**

EMPLOYMENT	<b>Research Intern, CyberLogitec</b>	10/2020 - 01/2021
	<ul style="list-style-type: none"> <li>• Constructing additional health care data to train the artificial intelligence model which diagnosis cancer.</li> <li>• Conducting the preprocessing stage of extracting metadata of DICOM (Digital Imaging and Communications in Medicine).</li> </ul>	
	<b>Software Engineer, Innertainmnet</b>	03/2020 - 06/2020
	<ul style="list-style-type: none"> <li>• Developed machine learning content recommendation service application based on user interests.</li> <li>• Implemented a recommendation system using TF-IDF and word2vec.</li> </ul>	
	<b>Co-founder, Software Engineer, Startup-Giljabi</b>	03/2016 - 03/2017
	<ul style="list-style-type: none"> <li>• Conceptualized chat application for travelers who travel alone and need online guidance.</li> <li>• Managed and developed a server which connected mobile users and web users in real-time.</li> </ul>	
PROJECTS	<b>CS20480 Artificial Intelligence <a href="#">[pdf]</a></b>	Spring 2020
	<ul style="list-style-type: none"> <li>• Improved the full-text corpus of Genomics &amp; Informatics by semi-automatically detecting and correcting PDF-to-text conversion errors and optical character recognition errors.</li> </ul>	
	<b>CS35913 Human-Computer Interaction <a href="#">[demo]</a></b>	Fall 2019
	<ul style="list-style-type: none"> <li>• Conducted three types of analysis: user, task, and domain, and developed a web application for various art lovers.</li> </ul>	
	<b>CS36510 Virtual Reality and Interaction Techniques <a href="#">[demo]</a></b>	Fall 2019
	<ul style="list-style-type: none"> <li>• Implemented a virtual museum that can interact with 3D objects by using C#, Unity, Oculus VR.</li> </ul>	
	<b>CS20494 Computer Graphics <a href="#">[code]</a></b>	Fall 2018
	<ul style="list-style-type: none"> <li>• Designed and implemented a ray tracer using OpenGL and C++.</li> <li>• Won 1st place in the final project.</li> </ul>	
HONORS & AWARDS	<b>Student Independent Research Competition 2nd Prize</b> , Information Technology Research Center	2020
	<b>Student Research Grant</b> , Information Technology Research Center	2020
	<b>Dean's List</b> , Ewha Womans University	2019
	<b>Graduation Project Competition 1st Prize in Research Track</b> , Ewha Womans University	2019
	<b>Future Capability Development Scholarship</b> , Ewha Womans University	2019
	<b>IBM CEO Award</b> , IBM Korea	2018
	<b>Finalist of Hanium Constest</b> , Ministry of Science and ICT	2018
	<b>Tech Idea Hackathon Prime Pitch Day 3rd Prize</b> , Ewha Womans University	2018
	<b>Academic Scholarship</b> , Ministry of National Defense	2017
COMPETENCES	<b>Languages</b> korean ( <i>native</i> ), English ( <i>proficient</i> )	
	<b>Techniques</b> <ul style="list-style-type: none"> <li>• Programming: Java, Android (Java, Kotlin), C/C++, C#, Python, PHP, HTML, CSS, Javascript, R</li> <li>• Deep Learning Framework: Tensorflow, Pytorch</li> </ul>	