

# Sangwook Lee

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## RESEARCH INTEREST

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I work at the intersection of **Human-AI Interaction (HAI)**, **Social Computing**, and **Accessibility**, designing **AI-based agents that bridge gaps between people**. My research spans two threads: a knowledge agent that bridges the **knowledge gap** among organizational members, and a UI agent that bridges the **digital divide** across users of complex digital interfaces.

## EDUCATION

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### Virginia Tech

*Ph.D. in Computer Science*

- Advisor: Sang Won Lee

Blacksburg, VA  
*Aug. 2024 - May 2029*

### Korea Advanced Institute of Science and Technology (KAIST)

*M.S. in Computer Science*

- Advisor: Insik Shin
- Thesis: A Task-Oriented Multimodal Agent System to Enhance Mobile User Interface Accessibility for Older Adults

Daejeon, Korea  
*Sep. 2021 - Feb. 2024*

### Pohang University of Science and Technology (POSTECH)

*B.S. in Convergence IT Engineering (Cum Laude)*

Pohang, Korea  
*Mar. 2014 - Aug. 2020*

## REFEREED JOURNALS AND CONFERENCE PROCEEDINGS

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### **MAESTRO: Adapting GUIs and Guiding Navigation with User Preferences in Conversational Agents with GUIs**

**Sangwook Lee**, Sang Won Lee, Adnan Abbas, Young-Ho Kim, Yan Chen  
*arXiv Preprint (Under Review)*

### **CHOIR: A Chatbot-mediated Organizational Memory Leveraging Communication in University Research Labs**

**Sangwook Lee**, Adnan Abbas, Yan Chen, Young-Ho Kim, Sang Won Lee  
*CHI '26: Proceedings of the 2026 CHI Conference on Human Factors in Computing Systems*  
🏆 **Honorable Mention**

### **Toward Context-Aware and Personalized Sit-Stand Desk Interventions: Insights from a Field Observational Study**

Donghan Hu, Junghoon Chung, Daniel Vargas Diaz, **Sangwook Lee**, Sang Won Lee, Sol Lim  
*International Journal of Human-Computer Interaction (September 2025)*

### **ModSandbox: Facilitating Online Community Moderation Through Error Prediction and Improvement of Automated Rules**

**Sangwook Lee\***, Jean Y Song\*, Jisoo Lee, Mina Kim, Juho Kim (\*Equal Contribution)  
*CHI '23: Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems*

**A-Mash: Providing Single-App Illusion for Multi-App Use Through User-centric UI Mashup**  
Sunjae Lee, Hoyoung Kim, Sijung Kim, **Sangwook Lee**, Hyosu Kim, Jean Young Song, Steve Ko, Sangeun Oh, Insik Shin

*MobiCom '22: Proceedings of the 28th Annual International Conference on Mobile Computing And Networking*

## **LIGHTLY REVIEWED PAPERS - POSTERS, NOTES, AND WORKSHOP PAPERS**

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**LV-Linker: Supporting Fine-grained User Interaction Analyses by Linking Smartphone Log and Recorded Video Data**

Hansoo Lee, **Sangwook Lee**, Youngji Koh, Uichin Lee

*UIST '22 Adjunct: Adjunct Proceedings of the 35th Annual ACM Symposium on User Interface Software and Technology*

**Implications for the Design of Sexual Harassment Prevention System for Online Games**

Wookjae Maeng, Hyeok Kim, Junhee Woo, Youngjin Huh, Seo-young Lee, Jeewon Choi, **Sangwook Lee**, Jinsu Eun, Kung Jin Lee, Joonhwan Lee

*Proceedings of HCI Korea 2018*

**Mutiv: Music-based Mobile Application to Support Joggers**

**Sangwook Lee**, Hyunggu Jung

*2016 IEEE International Conference on Healthcare Informatics (ICHI)*

**LaneMate: Car sensing system for the deaf**

**Sangwook Lee**, Yunho Kang, Yukyoung Lee

*CHI EA '16: Proceedings of the 2016 CHI Conference Extended Abstracts on Human Factors in Computing Systems, Student Design Competition*

**🏆 Honorable Mention**

## **RESEARCH EXPERIENCE**

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**SaNDwich Lab, University of Notre Dame**

South Bend, IN

*Visiting Student (Mentor: Toby Jia-Jun Li)*

*Jun. 2023 - Aug. 2023*

- Coordinated a study on a task-oriented multimodal agent system to improve older adults' smartphone experience
- Mentored two undergraduates to develop a conversational agent that interacts with mobile web applications powered by OpenAI API

**KIXLAB, KAIST**

Daejeon, Korea

*Research Intern (Mentor: Juho Kim, Jean Y. Song)*

*Sep. 2020 - Sep. 2021*

- Led research on a system that enables community moderators to configure rule-based moderation tools
- Conducted semi-structured interviews and user studies with Reddit moderators
- Developed a web application (React/Django) that tests rules with real-world posts, visualizing violations and identifying potentially erroneous cases

## HCI+D Lab, Seoul National University

Research Intern (Mentor: Joonhwan Lee)

Seoul, Korea

Jul. 2017 - Aug. 2017

- Conducted a participatory design workshop with female gamers to address sexual harassment in online games

## WORK EXPERIENCE

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### Fluiz, Inc.

Software Engineer (CEO: Insik Shin)

Seoul, Korea

Feb. 2024 - Aug. 2024

- Led the development of an intelligent workflow automation system for commercial ERP solutions, leveraging LLMs to capture and operationalize domain expertise
- Built a Chrome extension-based interaction recording tool enabling domain experts to easily translate business workflows into automation-ready data
- Designed an execution server that stores recorded workflows in a graph database and automates web-based tasks through multi-turn conversations

## SKILLS

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### Tools

- **Agentic Coding** - Claude Code, Cursor IDE
- **Prototyping tool** - Figma, Arduino
- **Front-end development** - React, React Native, Flutter
- **Back-end development** - Express, Fastify, Django, Prisma
- **Data processing** - LangChain, Pandas, PyTorch, Plot.ly
- **Programming Language** - C, C++, JavaScript, TypeScript, Python, R, Dart

### Language

- **Korean** - Native
- **English** - Fluent

## ACADEMIC SERVICES

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- **Student Volunteer** - CHI 2026, 2025, 2024 (Photography SV); CHI 2023 (On-site); CHI 2022, 2021, CSCW 2020 (Remote)
- **Reviewer** - CHI 2026 (3 Outstanding Reviewer Recognitions), CSCW 2024, CHI 2023 LBW

## TEACHING

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### Data and Algorithm Analytics

VT CS4104 Teaching Assistant (Instructor: Thang Hoang)

Fall 2025

### Human-Computer Interaction

KAIST CS584 Teaching Assistant (Instructor: Geehyuk Lee)

Fall 2023

### Operating Systems and Lab

KAIST CS330 Teaching Assistant (Instructor: Insik Shin)

Fall 2021