

Sangwook Lee

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RESEARCH INTEREST

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

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

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 (Top 5% Accepted Paper)**

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

Redistributing Interdependence in Organizational Knowledge Work: Lessons from Deploying an LLM Mediator in Research Labs

Sangwook Lee, Sang Won Lee

Co-Data: Cultivating Effective Human-LLM Collaboration for Collaborative Data Processing Workshop at CHI '26

TUNING: Adaptive GUI Modification as Agent Tools in Task-Oriented Chatbots

Sangwook Lee, Sang Won Lee

Human-AI-UI Interactions Across Modalities Workshop at CHI '26

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

🏆 **Honorable Mention (Student Design Competition Final Round)**

RESEARCH EXPERIENCE

SaNDwich Lab, University of Notre Dame

Visiting Student (Mentor: Toby Jia-Jun Li)

South Bend, IN

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

Seoul, Korea

Research Intern (Mentor: Joonhwan Lee)

Jul. 2017 - Aug. 2017

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

WORK EXPERIENCE

Fluiz, Inc.

Seoul, Korea

Software Engineer (CEO: Insik Shin)

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

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

- **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

Data and Algorithm Analytics Fall 2025

VT CS4104 Teaching Assistant (Instructor: Thang Hoang)

Human-Computer Interaction Fall 2023

KAIST CS584 Teaching Assistant (Instructor: Geehyuk Lee)

Operating Systems and Lab Fall 2021

KAIST CS330 Teaching Assistant (Instructor: Insik Shin)