

# Sangwook Lee

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## RESEARCH INTEREST

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I study how LLM-based agentic systems can bridge knowledge gaps in collaborative environments by facilitating context-aware communication and collective learning. My goal is to design intelligent systems that empower people to create, share, and utilize knowledge more effectively across organizational contexts.

## EDUCATION

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Virginia Tech  
Ph.D. in Computer Science  
• Advisor: Sang Won Lee  
Blacksburg, VA  
Aug. 2024 - Present

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

## WORK EXPERIENCE

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Fluiz, Inc.  
Software Engineer (CEO: Insik Shin)  
• 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  
Seoul, Korea  
Feb. 2024 - Aug. 2024

## RESEARCH EXPERIENCE

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SaNDwich Lab, University of Notre Dame  
Visiting Student (Mentor: Toby Jia-Jun Li)  
• 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  
South Bend, IN  
Jun. 2023 - Aug. 2023

KIXLAB, KAIST  
Research Intern (Mentor: Juho Kim, Jean Y. Song)  
Daejeon, Korea  
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

## PUBLICATIONS

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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 (Conditionally Accepted)

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

Jean Y Song\*, Sangwook Lee\*, Jisoo Lee, Mina Kim, Juho Kim (\*Equal Contribution)

CHI '23: Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems

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

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

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

## TEACHING

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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)

## ACADEMIC SERVICES

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

## 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