Sangwook Lee

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RESEARCH INTEREST

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

EDUCATION

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

Korea Advanced Institute of Science and Technology (KAIST)   Daejeon, Korea
M.S. in Computer Science   *Sep. 2021 - Feb. 2024*
  • Advisor: Insik Shin
  • Thesis: A Task-Oriented Multimodal Agent System to Enhance Mobile User Interface Accessibility for Older Adults

Pohang University of Science and Technology (POSTECH)   Pohang, Korea
B.S. in Convergence IT Engineering (Cum Laude)   *Mar. 2014 - Aug. 2020*

REFEREED JOURNALS AND CONFERENCE PROCEEDINGS

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

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
arXiv preprint (CHI 2026 Paper Under Review)

LIGHTLY REVIEWED PAPERS - POSTERS, NOTES, AND WORKSHOP PAPERS

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

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   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 2025 (Photography SV), CHI 2024 (Photography SV), CHI 2023 (On-site), CHI 2022 (Remote), CHI 2021 (Remote), CSCW 2020 (Remote)
- **Reviewer** - CHI 2026 (Special Recognition), 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)