

Kayoon Kim

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RESEARCH INTEREST

Human-AI Interaction, Decision Making, Computational Social Science

EDUCATION

University of Tübingen, Tübingen, Germany 2023.10-2026.03

M.S., Quantitative Data Science (*Concentration*: Machine Learning), GPA 1.81/1.0

Thesis: Sim-DSE: Mediating Multi-User Orchestration in Confined Shared Spaces through Simulation-Augmented Design Space Exploration (Advisor: Jan Henry Belz, Prof. Holger Brandt)

Chung-Ang University, Seoul, South Korea 2017.03-2023.02

B.A. B.E., Sociology & Computer Science, GPA 4.13/4.5 & 3.96/4.5

Thesis: Claiming for Rights: The Changing Landscape of Issues and Claims in the National Petition of South Korea, 2017-2020 (Advisor: Prof. Chan S. Suh)

RESEARCH EXPERIENCE

Thesis Student, Porsche AG Human-Centered AI Research (Advisor: Jan Henry Belz) 2025

- Identifying in-vehicle interaction design space for multi-occupant autonomous vehicles to establish design guidelines for the field; conducting a simulation study and an online survey
- Engineering a context-aware multi-agent architecture that enables adaptive vehicle configuration and human-centered interaction design, with an expectation for a user-study

Research Intern, Bosch Center for Artificial Intelligence (Advisor: Lukas Grossberger) 2024

- Developed and tested Preferential Bayesian Optimization algorithms to efficiently optimize machinery settings for expert operators, modeling human preferences in decision-making processes
- Conducted synthetic bias experiment, identified cognitive biases affecting decision-making and developed mitigation strategies for future human-in-the-loop experimental design

Research Assistant, Methods Center (Advisor: Prof. Augustin Kelava) 2023-2024

- Developed the model to predict student dropouts in STEM classes using multivariate time-series analysis (i.e., Kalman Filter) to strengthen the educational environment

Research Assistant, [Data Science Lab](#) (Advisor: Prof. Yoonsik Cho) 2021

- Explored recommendation systems by implementing and evaluating algorithms to enhance human decision-making

Research Assistant, [HIKE Lab](#) (Advisor: Prof. Haklae Kim) 2020-2021

- [COVID-19: Our Memory](#): Identified pandemic-driven social inequalities through statistical correlation analysis, text mining, and archival research; recognized with a Community Award in the collaborative hackathon organized by the Ministry of Interior and Safety of Korea, among 320 participants

- Assessed policy efficacy (i.e., screening facilities, hospital bed capacity), enhanced data visualization accessibility for the general public, and developed recommendations for public health data infrastructure improvements as a team; presented the work on Open Data Day in Seoul 2021

- As a first case of a non-governmental digital archive, both projects were donated to the National Library of Korea

Research Assistant, [Da Move Lab](#) (Advisor: Prof. Chan S. Suh) 2020-2023

- Constructed and analyzed 3-year dataset of South Korea's online petitions revealing embedded biases through text mining and NLP techniques
- Extended dataset analysis to entire system's duration; applied fine-tuned language models for sentiment analysis and regression modeling to identify structural limitations in civic engagement platforms

PAPERS	[2] Sim-DSE: Mediating Multi-User Orchestration in Confined Shared Spaces through Simulation-Augmented Design Space Exploration Jan Henry Belz*, Kayoon Kim * <i>In progress, UIST 2026</i> *Equal Contribution	
	[1] Mobilizing grievances in the internet age: The case of national online petitioning in South Korea, 2017–2022 Kayoon Kim , Chan S. Suh PLOS ONE 2024	
POSTERS	[2] Sim-DSE: Mediating Multi-User Orchestration in Confined Shared Spaces through Simulation-Augmented Design Space Exploration Jan Henry Belz*, Kayoon Kim * <i>Submitted, CHI 2026</i> *Equal Contribution	
	[1] Claiming for Rights: The Changing Landscape of Issues and Claims in the National Petition of South Korea, 2017-2020 Kayoon Kim International Postgraduate and Academic Conference 2021	
WORK EXPERIENCE	Data Quality Manager Intern , Kakao Style, South Korea • Analyzed model prediction data and developed dashboards to enhance model accuracy and user experience; Designed and developed an automatic labeling model that automated labeling processes, reducing manual effort by 50%	2023
HONORS & GRANTS	DAAD STIBET Scholarship , German Academic Exchange Service (DAAD)	2025
	Research Stipend , Porsche AG	2025-2026
	Research Grant , National Research Foundation of Korea	2024
	Merit-and-need-based Scholarship , Seoul Scholarship Foundation	2022
	Merit-and-need-based Scholarship , Lotte Scholarship Foundation	2021
	Community Award , Ministry of the Interior and Safety, South Korea	2020
SERVICE	National Scholarship , Korea Student Aid Foundation	2017-2021
	Communication Chair Volunteer, Tübingen Women in Machine Learning	2025
	Content Creator Volunteer, Soapbox Science Tübingen	2025
	Guest Speaker, Chung-Ang University	2022
	• Delivered a single session lecture on the overview of computational social science and data science for an Introduction to Sociology course to engage freshmen	
	Academic Advisor, COSADAMA	2020-2021
SKILLS	• Designed instructional sessions on Git, GitHub, and Python programming for non-STEM major students; mentored participants throughout the learning process	
	Class Representative, Chung-Ang University	2018
	Language English (Full professional proficiency), Korean (Native) Programming and Development Python, R, C, SPSS, MySQL, Pytorch, Git, Linux	