

Kayoon Kim

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| RESEARCH INTEREST | Human-AI Interaction, Decision Making, Computational Social Science | |
| EDUCATION | University of Tübingen, Tübingen, Germany M.S., Quantitative Data Science (<i>Concentration</i> : 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) | 2023.10-2026.03 |
| | Chung-Ang University, Seoul, South Korea 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) | 2017.03-2023.02 |
| RESEARCH EXPERIENCE | Thesis Student , Porsche AG Human-Centered AI Research (Advisor: Jan Henry Belz) • 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 | 2025 |
| | Research Intern , Bosch Center for Artificial Intelligence (Advisor: Lukas Grossberger) • 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 | 2024 |
| | Research Assistant , Methods Center (Advisor: Prof. Augustin Kelava) • Developed the model to predict student dropouts in STEM classes using multivariate time-series analysis (i.e., Kalman Filter) to strengthen the educational environment | 2023-2024 |
| | Research Assistant , Data Science Lab (Advisor: Prof. Yoonsik Cho) • Explored recommendation systems by implementing and evaluating algorithms to enhance human decision-making | 2021 |
| | Research Assistant , HIKE Lab (Advisor: Prof. Haklae Kim) • 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 | 2020-2021 |
| | Research Assistant , Da Move Lab (Advisor: Prof. Chan S. Suh) • 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 | 2020-2023 |

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| PAPERS | <p>[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> <small>*Equal Contribution</small></p> <p>[1] Mobilizing grievances in the internet age: The case of national online petitioning in South Korea, 2017–2022 Kayoon Kim, Chan S. Suh <i>PLoS ONE 2024</i></p> |
| POSTERS | <p>[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> <small>*Equal Contribution</small></p> <p>[1] Claiming for Rights: The Changing Landscape of Issues and Claims in the National Petition of South Korea, 2017-2020 Kayoon Kim <i>International Postgraduate and Academic Conference 2021</i></p> |
| WORK EXPERIENCE | <p>Data Quality Manager Intern, Kakao Style, South Korea 2023</p> <ul style="list-style-type: none"> 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% |
| HONORS & GRANTS | <p>DAAD STIBET Scholarship, German Academic Exchange Service (DAAD) 2025</p> <p>Research Stipend, Porsche AG 2025-2026</p> <p>Research Grant, National Research Foundation of Korea 2024</p> <p>Merit-and-need-based Scholarship, Seoul Scholarship Foundation 2022</p> <p>Merit-and-need-based Scholarship, Lotte Scholarship Foundation 2021</p> <p>Community Award, Ministry of the Interior and Safety, South Korea 2020</p> <p>National Scholarship, Korea Student Aid Foundation 2017-2021</p> |
| SERVICE | <p>Communication Chair Volunteer, Tübingen Women in Machine Learning 2025</p> <p>Content Creator Volunteer, Soapbox Science Tübingen 2025</p> <p>Guest Speaker, Chung-Ang University 2022</p> <ul style="list-style-type: none"> Delivered a single session lecture on the overview of computational social science and data science for an Introduction to Sociology course to engage freshmen <p>Academic Advisor, COSADAMA 2020-2021</p> <ul style="list-style-type: none"> Designed instructional sessions on Git, GitHub, and Python programming for non-STEM major students; mentored participants throughout the learning process <p>Class Representative, Chung-Ang University 2018</p> |
| SKILLS | <p>Language English (Full professional proficiency), Korean (Native)</p> <p>Programming and Development Python, R, C, SPSS, MySQL, Pytorch, Git, Linux</p> |