Kayoon Kim

kyoonkm@gmail.com • https://kyoonkm.github.io
Last updated: September 2, 2025

RESEARCH VISION

My research vision is to make data and algorithms serve humanity by mediating between people and AI systems. My research has been focused on (1) exposing social problems and developing data-driven solutions, (2) enhancing human decision-making while preventing marginalization.
Research Interest: Human-AI Interaction, Human-Vehicle Interaction, Computational Social Science

EDUCATION

University of Tübingen, Tübingen, Germany 2023 Oct-2026 Mar
M.S., Quantitative Data Science, *Magna cum laude*
Advisors: Jan Henry Belz, Prof. Augustin Kelava
Examiners: Dr. Tobias Grosse-Puppendahl, Prof. Holger Brandt
Thesis: Carmony: Multimodal Context-Aware Device Orchestration in Multi-User Automotive Environments (Tentative)

Chung-Ang University, Seoul, South Korea 2017 Mar-2023 Feb
B.A. B.E., Sociology (Major), Computer Science (Concentration), *Cum laude*
Advisor: Prof. Chan S. Suh
Thesis: Claiming for Rights: The Changing Landscape of Issues and Claims in the National Petition of South Korea, 2017-2020

HONORS & GRANTS

DAAD STIBET Scholarship, German Academic Exchange Service (DAAD) 2025
Research Grant, Porsche AG 2025
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
Awarded at the hackathon sponsored by the Ministry of Interior and Safety of Korea for the COVID-19 project
National Scholarship (10 semesters), Korea Student Aid Foundation

RESEARCH EXPERIENCE

Master Thesis Student, Porsche AG Human-Centered AI Research Lab 2025
• Advisor: Jan Henry Belz
Implementing a context-aware system using AI agents for decision-making on optimal vehicle configurations and seamless human-vehicle interaction for all occupants

Research Assistant, Methods Center, University of Tübingen 2023-2024
• 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

Research Assistant, Data Science Lab, Chung-Ang University 2021 Summer
• Advisor: Prof. Yoonsik Cho
Implemented and evaluated recommendation systems enhancing human decision-making

Research Assistant, HIKE Lab: Team Cayley, Chung-Ang University 2020-2021

• Advisor: Prof. Haklae Kim

COVID-19: Our Memory: Investigated pandemic-driven social inequalities through statistical correlation analysis, text mining, and news media archiving

COVID-19 Data Analysis A to Z: Assessed policy efficacy (i.e., pandemic screening facilities, hospital bed capacity), enhanced data visualization accessibility for the general public, and developed recommendations for public health data infrastructure improvements

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

Research Assistant, Da Move Lab, Chung-Ang University 2020-2021

• Advisor: Prof. Chan S. Suh

Conducted an analysis of South Korea's online petition system, revealing unresolved social issues; presented at the International Postgraduate and Academic Conference 2021

PUBLICATIONS

[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

WORK EXPERIENCE

Research Intern, Bosch Center for Artificial Intelligence (BCAI), Germany 2024

• 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 and identifying cognitive biases for future human-in-the-loop experiments

Data Quality Manager Intern, Kakao Style, South Korea 2023

• Analyzed model prediction data and developed dashboards to enhance model accuracy and user experience. Designed and implemented an automatic labeling model to streamline the workflow

SERVICE

Volunteer, Tübingen Women in Machine Learning 2025

Volunteer, Soapbox Science Tübingen 2025

• Created engaging digital content to advertise the events and connect the public with leading women scientists

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

• Designed instructional sessions on Git, GitHub, and Python programming for non-STEM major students; mentored participants throughout the learning process

SKILLS

Language

English (Full professional proficiency), Korean (Native)

Programming and Development

Python, R, C, SPSS, MySQL, Pytorch, Git, Linux