Suehyun Kim

suehyunkim@snu.ac.kr | suehkim.github.io | suehyun-kim

Education

Seoul National University *Seoul, South Korea*
M.S. in Statistics *2024 - 2026 (expected)*
- Advisor: Kwonsang Lee

Seoul National University *Seoul, South Korea*
B.S. in Mathematical Sciences & Statistics (double major) *2019 - 2024*
- *Summa Cum Laude*

Publications

*: Equal contribution as co-first authors

Jang, J.*, **Kim, S.***, and Lee, K. (2025+). Mixing Samples to Address Weak Overlap in Causal Inference. *Submitted.* [arXiv]

Kim, S. and Lee, K. (2025). A Design-Based Matching Framework for Staggered Adoption with Time-Varying Confounding. *Preprint.* [arXiv]

Research Experience

Causal Inference Lab., Seoul National University *Seoul, South Korea*
Research Assistant & Undergraduate Research Intern (Advisor: Kwonsang Lee) *Mar 2024 - present*
- Mixing samples to address weak overlap in observational studies
  - Developed a practical statistical tool, *mixing*, to mitigate overlap violations and improve performance and robustness to extreme weights in causal estimation, with extensions for modern weighting methods
- A design-based matching framework for causal inference in longitudinal datasets
  - Proposed a design-based inference procedure with a novel matching algorithm for simultaneous inference of heterogeneous causal effects under staggered adoption with time-varying confounders
  - Applied the algorithm to estimate time-specific effects of Netflix subscription on television viewing behavior

Statistical Learning Theory Lab., Seoul National University *Seoul, South Korea*
Undergraduate Research Intern (Advisor: Sungkyu Jung) *Dec 2023 - May 2024*
- Identifying common factors in multi-source data
  - Devised a new statistical algorithm and test to identify the joint structure of common factors across multiple data blocks by extending the concept of principal angles between subspaces

Data Science & Machine Learning Lab., Seoul National University *Seoul, South Korea*
Undergraduate Research Intern (Advisor: Gunwoong Park) *Jun 2023 - Aug 2023*
- Reviewed and analyzed key topics in functional data analysis and its real-world applications
- Studied the foundations of directed acyclic graphs in causal discovery and their recent advancements

Presentations

Conference Talks

Jang, J.*, **Kim, S.***, Lee, K. Mixing Samples to Address Weak Overlap in Causal Inference. *Korean Statistical Society Summer Conference*, Gyeongju, Korea, June 2025.

Jang, J.*, **Kim, S.***, Lee, K. Mixing Samples to Address Weak Overlap in Causal Inference. *American Causal Inference Conference (ACIC)*, Detroit, MI, United States, May 2025. *Selected for oral presentation.*

Poster Presentations

Kim, S. and Lee, K. A Design-Based Matching Framework for Staggered Adoption with Time-Varying Confounding. *Korean Statistical Society Winter Conference*, Seoul, Korea, December 2025.

Awards and Honors

August 2024 **Alumni Association President's Award**, Seoul National University
Selected as the sole graduate from college for exemplary conduct and leadership

2021 - 2023 **Kwanjeong Scholarship**, Kwanjeong Educational Foundation
Full tuition and fees for two years of undergraduate studies (KRW 22,000,000)

2020 - 2021 **GLEAP (Official Honor Society of College of Natural Sciences)**, Seoul National University

2019 - 2020 **Merit-Based Scholarship**, Seoul National University
Partial tuition for three semesters (KRW 5,390,000)

2019 - 2024 **Dean's List**, Seoul National University

Selected Project Experience

Understanding Young Stellar Cluster Formation in the Triangulum Galaxy (M33) through Point Process Models *Fall 2024*

Spatial Statistics (M1399.000300) Final Project

- Analyzed the spatial relationship between young star clusters and giant molecular clouds in the Triangulum Galaxy (M33) using inhomogeneous Poisson and Neyman-Scott process models

Application of Functional Clustering Methods to Climate Data *Summer 2023*

Undergraduate Research Internship Project

- Investigated functional PCA methods and functional clustering algorithms to analyze and interpret climate classifications based on annual temperature curves in Korea and Japan

Teaching Experience

Seoul National University

Winter 2024 **Freshman Pre-College Course in Statistics**, Teaching Assistant

Fall 2024 **Data Analysis and Lab. (M1399.001400)**, Teaching Assistant

Spring 2024 **Statistics (F32.102)**, Peer Tutor

Extracurricular Activities

2021 **Student President of SNU Department of Mathematical Sciences**

2019-2021 **Science Experience Camp at SNU College of Natural Sciences**, Mentor in Mathematics
Official 4-day summer outreach program offering students from under-resourced public high schools the opportunity to explore natural science fields

Winter 2019 **Global SNU Social Responsibility (SNUSR) Corps**, Vice Team Leader of Team Uzbekistan
Overseas volunteering program in developing countries, fostering global sustainable growth and reflecting social responsibility of SNU

Skills

Programming R, Python, C, LaTeX

Language Korean (native), English (fluent), Russian (proficient)