Min Woo Park

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Short bio. My research focuses on Causal Decision Making and Causal Effect Identification. I study how to graphically model a wide range of real-world problems in a causal manner and make optimal decisions. In particular, my research explores methods for making robust decisions, even when modeling with incomplete information, and decision-making processes in sequential settings.

Education

Graduate School of Data Science, Seoul National University　　　　Seoul, Republic of Korea
Integrated M.S and Ph.D in Data Science (Advisor: Prof. Sanghack Lee)　　Fall 2022 - Fall 2027 (expected)

Department of Mathematics and Statistics, Sejong University　　　　Seoul, Republic of Korea
B.S in Applied statistics and Mathematics, Cum Laude (Advisor: Prof. Ji Eun Lee)　　Spring 2016 - 2022

Publications

* for joint first authorship and † for corresponding author.

1. Structural Causal Bandits under Markov Equivalence
   Min Woo Park, Andy Arditi, Elias Bareinboim†, Sanghack Lee†
   Neural Information Processing Systems (NeurIPS), 2025., Columbia CausalAI Laboratory, Technical Report (R-122)
   (Acceptance rate: 24.52%).

2. On Transportability for Structural Causal Bandits
   Min Woo Park and Sanghack Lee†
   arXiv preprint, 2025.

3. Complete Graphical Criterion for Sequential Covariate Adjustment in Causal Inference
   Yonghan Jung†, Min Woo Park, and Sanghack Lee†
   Neural Information Processing Systems (NeurIPS), 2024
   (Acceptance rate: 25.75%).

4. Computation of the iterated Aluthge, Duggal, and Mean transforms
   Min Woo Park*, and Ji Eun Lee*†
   Filomat, 2023.

5. Counterfactual Structural Causal Bandits
   Min Woo Park and Sanghack Lee†
   under review.

6. Convergence of the iterated mean transforms of a 2×2 matrix
   Ji Eun Lee*† and Min Woo Park*
   under review.

Awards and Honors

BK21 Scholarship	2024, 2025
4th place award | The 9th College of Natural Sciences Academic Conference, Sejong University	Nov 2021
1st place academic scholarship | Department of Mathematics and Statistics, Sejong University	Fall 2021
3rd place award | The 8th College of Natural Sciences Academic Conference, Sejong University	Nov 2020
1st place academic scholarship | Department of Mathematics and Statistics, Sejong University	Fall 2020

Projects

Scalable Causal Discovery | LG AI Research	Sep 2025 - present
Hyundai NGV Data Boot-Campus | Hyundai Motors	July 2025 - Sep 2025
Hyundai NGV Data Boot-Campus | Hyundai Motors	July 2024 - Sep 2024

Teaching Assistants

Causal Inference for Data Science	Spring, Fall 2024, Spring 2025
Machine Learning and Deep Learning for Data Science II	Fall 2023
Basic Mathematics for Artificial Intelligence	Spring 2022

Invited Talks

Structural Causal Bandits under Markov Equivalence

ExploreCSR poster session | Seoul, Republic of Korea	Dec 2025
NeurIPS 2025 poster session | San Diego, USA	Dec 2025
JKAIA 2025, NeurIPS preview session | Seoul, Republic of Korea	Nov 2025
SNU GSDS student research seminar | Seoul, Republic of Korea	Apr 2025

Complete Graphical Criterion for Sequential Covariate Adjustment in Causal Inference

NeurIPS 2024 poster session | Vancouver, Canada	Dec 2024
SNU GSDS student research seminar | Seoul, Republic of Korea	Dec 2024

Academic Services

Conference Reviewer: 2026 ICLR, 2025 ICML

Reference

Sanghack Lee | Seoul National University   sanghack@snu.ac.kr
Associate professor

Ji Eun Lee | Sejong University   jieunlee7@sejong.ac.kr
Associate Professor

Jin Hee Yoon | Sejong University   jin9135@sejong.ac.kr
Assistant Professor

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