

Jooho Kim

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Education

Seoul National University <i>MS in Statistics</i>	Mar. 2024 – Feb. 2026
Korea University <i>BE in Food and Resource Economics, Double major in Statistics</i>	Mar. 2018 – Feb. 2024
The University of Texas at Austin <i>Exchange Program, Economics</i>	Aug. 2022 – Dec. 2022

Research Interest

Missing Data, Survival Analysis, Causal Inference, Statistical Uncertainty Quantification for AI

Preprints

Kim, J. , Saegusa, T., and Shin, Y. E. (2025). “Robust and Scalable Multiple Imputation for Case-Cohort Studies via Influence Function-based Supersampling.” <i>Preprint.</i> [arXiv:xxxxx] 🔗	To be submitted
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Research Experience

Prediction Modeling Lab, Seoul National University <i>Graduate Researcher (Advisor: Dr. Yei Eun Shin)</i>	Seoul, South Korea Jun. 2024 – Present
<ul style="list-style-type: none"> ◦ Led as the primary graduate researcher on a project funded by the National Research Foundation of Korea: “Multiple Imputation for Missing Covariates due to Epidemiological Cohort Sampling Designs”. ◦ Developed influence function-based supersampling approach to impute only a subset (e.g., 3%) of the missing covariate while preserving efficiency and unbiasedness. ◦ Devised weight calibration equations that reconcile heterogeneous sampling weights for a unified Cox proportional hazards regression analysis. ◦ Applied the proposed method to NIH-AARP Diet and Health Study, reducing the imputation time by approximately 95% in SMC-FCS method. 	
Urban Informatics Lab, The University of Texas at Austin <i>Undergraduate Research Assistant (Connected through Dr. Arya Farahi)</i>	Austin, United States Oct. 2022 – Dec. 2022
<ul style="list-style-type: none"> ◦ Aggregated and cleaned geotagged electric vehicle tweets using regular expressions to handle misspellings and variant notations of the U.S. states. ◦ Conducted hotspot analysis across the U.S. to identify regions with significant EV-related public sentiment. 	

Presentation

Robust and Scalable Multiple Imputation for Case-Cohort Studies via Influence Function-based Supersampling Korean Statistical Society, Seoul, Korea (Accepted for Oral Presentation).	Dec. 2025
Multiple Imputation for Incomplete Survival Data with Missing Covariates: Toward Valid Causal Inference Proceedings of the 2nd Symposium on Causal Inference, Seoul, Korea (Oral Presentation, English).	Jun. 2025

Honors and Awards

Next Generation Scholarship for Fundamental Research <i>Awarded by Seoul National University for academic and research potential</i>	2024, 2025
Graduate Research Fellowship in Science and Engineering <i>Awarded a research grant by the National Research Foundation of Korea (NRF) through a proposal review process</i>	Sep. 2024 – Aug. 2025

Semester High Honors

2018 F, 2022 S, 2023 S

Awarded for achieving a semester GPA greater than 4.0/4.5

Agricultural Economics Alumni Scholarship

2021

Recognized for academic performance

Teaching Assistantship

Survival Data Analysis and Lab

Fall 2025

Advanced Undergraduate Course

- Led hands-on lab session on survival analysis and graded assignments and exams.

Selected Topics Seminar

Spring 2025

Introductory Undergraduate Course

- Organized weekly discussion sessions on economics and statistics, and advised on data analysis projects.

Mathematical Statistics 2

Fall 2024

Core Undergraduate Course

- Held office hours, graded assignments and exams, and prepared solution sets.

Statistics Lab

Spring 2024

Introductory Undergraduate Course

- Evaluated Python programming coursework, and held office hours.

Projects

Statistical Consulting: Risk Factors of Mortality and Hospitalization

Sep. 2025

- Analyzed risk factors for mortality and hospital stay using GLMM with multiple imputation, addressing repeated events and missing data.

Weight Design Project for the Longitudinal Survey Panel

Oct. 2024

- Implemented stratified sampling weights using the R `survey` package and advised on missing data handling in the SNU student survey.

Bitcoin Chart Pattern Image Recognition and Price Prediction Project

May 2022 – Jul. 2022

[Github Repository](#) [🔗](#)

- Implemented Monte Carlo Dropout in the N-BEATS time-series neural network to quantify predictive uncertainty and visualize prediction intervals.
- Augmented chart image data using probability distributions resulting in 5%p increase in accuracy.

Optimizing Pricing Strategies for a Low-Demand Food Product

May 2022 – Jun. 2022

- Designed an online survey and conducted a conjoint analysis to identify consumer preference.
- Developed an algorithm in Python to estimate the profit-maximizing bundle price for the products.

Data Visualization of Job Openings in Korea

Nov. 2021 – Jan. 2022

[Github Repository](#) [🔗](#) (In Korean)

- Extracted and preprocessed 36,000 job postings and 11,000 resumes by identifying html patterns.

Skills & Languages

Software R, Python, \LaTeX , SAS, ArcGIS, STATA, SPSS

Languages Fluent in English, Native in Korean