

# Junhyoung Chung

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## Education

**Seoul National University**, M.S. in Statistics 03/2024 – 02/2026 (expected)  
• Advisor: [Gunwoong Park](#)

**Seoul National University**, B.S. & B.A. in Statistics & Economics (double major) 03/2018 – 02/2024  
• *Summa cum laude*  
• Completed mandatory military service as Squad Leader, Republic of Korea Army (09/2019 – 04/2021).

\* indicates the first author, and † indicates the authors who contributed equally.

Summaries of all studies are available on my website <https://junhyoung-chung.github.io/archive/>.

## Ongoing Works

**Operator Fused Optimal Transport: A Convex and Geometry-Preserving Formulation** 09/2025 – present  
*Junhyoung Chung*<sup>\*</sup>, Gunwoong Park  
In preparation for ICML 2026 (full draft available upon request).

## Publications

**Prediction of high-risk mountain accident areas using a Hurdle model** (*Written in Korean*) 08/2025  
*Junhyoung Chung*<sup>\*</sup>, Sungjin Lee, Gunwoong Park  
In *Korean Journal of Applied Statistics*, 38(4), 531-551, [10.5351/KJAS.2025.38.4.531](#)

**Discovering causal structures in corrupted data: Frugality in anchored Gaussian DAG models** 08/2025  
Joonho Shin<sup>†</sup>, *Junhyoung Chung*<sup>†</sup>, Seyong Hwang<sup>†</sup>, Gunwoong Park<sup>†</sup>  
In *Computational Statistics and Data Analysis*, 213, 108267, [10.1016/j.csda.2025.108267](#)

**Learning distribution-free anchored linear structural equation models in the presence of measurement error** 12/2024  
*Junhyoung Chung*<sup>\*</sup>, Youngmin Ahn, Donguk Shin, Gunwoong Park  
In *Journal of the Korean Statistical Society*, 1-25, [10.1007/s42952-024-00298-9](#)

**Horse race rank prediction using learning-to-rank approaches** (*Written in Korean*) 04/2024  
*Junhyoung Chung*<sup>\*</sup>, Donguk Shin, Seyong Hwang, Gunwoong Park  
In *Korean Journal of Applied Statistics*, 37(2), 239-253, [10.5351/KJAS.2024.37.2.239](#)

## Projects

**Korean National Fire Agency**, The central administrative agency of South Korea responsible for firefighting affairs 08/2024 – 12/2024

- Developed a grid-based prediction model for mountain accidents using a Hurdle model, improving F1 by 20 percentage points.

**Healing Paper**, Online cosmetic surgery matchmaking platform in South Korea 09/2022 – 12/2022  
• Developed a classification framework for advertisement images by extracting key information with NLP and computer vision.

**Loadcomplete**, Mobile game studio in South Korea 07/2022 – 08/2022  
• Estimated user retention by modeling with rational functions and shifted Beta-Geometric (sBG) models.

**LaundryGo**, On-demand laundry service platform in South Korea 03/2022 – 06/2022  
• Analyzed pricing plans and derived subscription recommendations based on user behavior patterns.

Research Experience

<b>Data Science &amp; Machine Learning Lab.</b> , Seoul National University	06/2023 – present
<ul style="list-style-type: none"><li>Graphical models<ul style="list-style-type: none"><li>Developed consistent algorithms to discover latent DAG structures with contaminated data.</li><li>Extended nonparanormal graphical models to accommodate symmetric distributions by leveraging convex ordering.</li></ul></li><li>Optimal transport<ul style="list-style-type: none"><li>Proposed a novel convex formulation of geometry-preserving optimal transport (Operator Fused OT), bridging feature-based and structural alignment in the fused Gromov–Wasserstein setting.</li></ul></li><li>Applications<ul style="list-style-type: none"><li>Integrated a grid-based spatial model and a Hurdle model to predict mountain accidents.</li><li>Introduced learning-to-rank approaches to predict rankings in horse racing.</li></ul></li></ul>	

Teaching Experience

Seoul National University

<b>Leading Teaching Assistant</b> , Core Computing: Thinking with Computers	Fall 2024, Fall 2025
<b>Supporting Teaching Assistant</b> , Statistics	Fall 2025
<b>Supporting Teaching Assistant</b> , Statistics Lab.	Spring 2024
<b>Supporting Teaching Assistant</b> , Basic Computing: First Adventures in Computing	Spring, Fall 2023

Talks

<b>Learning distribution-free anchored linear structural equation models in the presence of measurement error</b> , <i>Korean Statistical Society Conference</i>	06/2025
<b>Discovering causal structures in privacy-protected and noisy data: Frugality in anchored Gaussian DAG models</b> , <i>Korea-Japan Joint Symposium of Statistics and Data Science</i>	11/2024
<b>Learning distribution-free anchored linear structural equation models in the presence of measurement error</b> , <i>Joint International Seminar in Collaboration with Kyushu University</i>	07/2024

Awards and Honors

<b>Outstanding Teaching Assistant Award</b> , <i>Seoul National University</i>	12/2025
<ul style="list-style-type: none"><li>Awarded based on student evaluations and instructor recommendation for the course <i>Core Computing: Thinking with Computers</i>.</li></ul>	
<b>Presidential Science Scholarship</b> , <i>Korea Student Aid Foundation</i> (Field: Math)	03/2025 – 02/2026 (expected)
<ul style="list-style-type: none"><li>Awarded by the President of South Korea as an outstanding graduate student in science and engineering.</li></ul>	
<b>Research Scholarship, Basic Science Research Program</b> , <i>National Research Foundation of Korea</i>	09/2024 – 09/2025
<ul style="list-style-type: none"><li>Prestigious NRF program supporting outstanding master’s students conducting innovative, thesis-related research.</li></ul>	
<b>3<sup>rd</sup> Prize, Online Overseas Volunteer Program Contest</b> , <i>Korean University Council for Social Service</i>	03/2022
<ul style="list-style-type: none"><li>Recognized for developing an online educational service for under-resourced students abroad.</li></ul>	
<b>Undergraduate Scholarship</b> , <i>Ilju Scholarship Foundation</i>	09/2018 – 02/2024
<ul style="list-style-type: none"><li>Received full tuition scholarship for 7 semesters.</li></ul>	

Extracurricular Activities

<b>Tennis Club</b> , Seoul National University	09/2021 – present
<ul style="list-style-type: none"><li>Served as a squad leader, organizing practices and mentoring new members.</li></ul>	

**Growth Hackers**, Business School, Seoul National University

03/2022 – 12/2022

- Participated in 3 real-world data projects with corporate clients, developing analytical solutions to real business problems.

**Global SNU Social Responsibility Corps**, Seoul National University

06/2021 – 08/2021

- Served as VR team leader in a collaborative online volunteer program with the National University of Laos, overseeing the production of VR content on smart farming and heat-illness prevention.

## Skills

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- **Programming:** Python, R, LaTeX
- **Language:** Korean (native), English (fluent), Japanese (conversational)

## English Proficiency Scores

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- **MyBest TOEFL score (Total 108/120):** Reading 30/30, Listening 28/30, Speaking 23/30, Writing 27/30
- **MyBest GRE score (Total 332/340):** Verbal 162/170, Quant 170/170, Analytical Writing 4.0/6.0