

Junhyoung Chung

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Education

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| Seoul National University , M.S. in Statistics | 2024.03 – 2026.02 (expected) |
| • Advisor: Gunwoong Park | |
| Seoul National University , B.S. & B.A. in Statistics & Economics (double major) | 2018.03 – 2024.02 |
| • <i>Summa cum laude</i> | |
| • Completed mandatory military service in South Korea (2019.09 – 2021.04). | |

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

In-press

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| Prediction of high-risk mountain accident areas using a Hurdle model (<i>Written in Korean</i>) | Accepted in 2025.05 |
| <i>Junhyoung Chung</i> [*] , Sungjin Lee, Gunwoong Park | |
| TBA in <i>Korean Journal of Applied Statistics</i> | |

Publications

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| Discovering causal structures in corrupted data: Frugality in anchored Gaussian DAG models | 2025.08 |
| Joonho Shin [†] , <i>Junhyoung Chung</i> [†] , Seyong Hwang [†] , Gunwoong Park [†] | |
| In <i>Computational Statistics and Data Analysis</i> , 213, 108267, 10.1016/j.csda.2025.108267 | |
| • A summary of this study can be found at my website . | |
| Learning distribution-free anchored linear structural equation models in the presence of measurement error | 2024.12 |
| <i>Junhyoung Chung</i> [*] , Youngmin Ahn, Donguk Shin, Gunwoong Park | |
| In <i>Journal of the Korean Statistical Society</i> , 1-25, 10.1007/s42952-024-00298-9 | |
| • A summary of this study can be found at my website . | |
| Horse race rank prediction using learning-to-rank approaches (<i>Written in Korean</i>) | 2024.04 |
| <i>Junhyoung Chung</i> [*] , Donguk Shin, Seyong Hwang, Gunwoong Park | |
| In <i>Korean Journal of Applied Statistics</i> , 37(2), 239-253, 10.5351/KJAS.2024.37.2.239 | |
| • A summary of this study can be found at my website . | |

Projects

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|---|-------------------|
| Korean National Fire Agency , The central administrative agency of South Korea responsible for firefighting affairs | 2024.08 – 2024.12 |
| • Developed a grid-based prediction model for mountain accidents using a Hurdle model. | |
| • Improved F1 score by 20 percentage points for binary classification compared to the baseline model. | |
| Healing Paper , Online cosmetic surgery matchmaking platform in South Korea | 2022.09 – 2022.12 |
| • Developed a classification framework for advertisement images by extracting key information with NLP and computer vision. | |
| • Designed data-driven marketing strategies to effectively promote surgical services based on the framework. | |

Loadcomplete , Mobile game studio in South Korea	2022.07 – 2022.08
<ul style="list-style-type: none"> • Built churn & LTV prediction models via daily play-pattern clustering. • Estimated user retention by modeling with rational functions and shifted Beta-Geometric (sBG) models. 	
LaundryGo , On-demand laundry service platform in South Korea	2022.03 – 2022.06
<ul style="list-style-type: none"> • Analyzed pricing plans and derived subscription recommendations based on user behavior patterns. • Designed a new pricing plan based on the analysis, which was successfully adopted and implemented. 	

Research Experience

Data Science & Machine Learning Lab. , Seoul National University	2023.06 – present
<ul style="list-style-type: none"> • Graphical models <ul style="list-style-type: none"> – Developed consistent algorithms to discover latent DAG structures with contaminated data. – Extended nonparanormal graphical models to accommodate symmetric distributions by introducing convex ordering. • Optimal transport <ul style="list-style-type: none"> – Proposed statistical algorithms to efficiently estimate continuous Brenier maps for optimal transport using Gaussian approximation. • Applications <ul style="list-style-type: none"> – Integrated a grid-based spatial model and a Hurdle model to predict mountain accidents. – Introduced learning-to-rank approaches to predict rankings in horse racing. 	

Teaching

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

Talks

Learning distribution-free anchored linear structural equation models in the presence of measurement error	2025.06
<ul style="list-style-type: none"> • Presented at <i>Korean Statistical Society Conference</i>. 	
Discovering causal structures in privacy-protected and noisy data: Frugality in anchored Gaussian DAG models	2024.11
<ul style="list-style-type: none"> • Presented at <i>Korea-Japan Joint Symposium of Statistics and Data Science</i>. 	
Learning distribution-free anchored linear structural equation models in the presence of measurement error	2024.07
<ul style="list-style-type: none"> • Presented at <i>Joint International Seminar in Collaboration with Kyushu University</i>. 	

Awards and Honors

Presidential Science Scholarship , Korea Student Aid Foundation (Field: Math)	2025.03 – present
<ul style="list-style-type: none"> • Awarded by the President of South Korea to outstanding graduate students in science and engineering. • Received a monthly living stipend of ~\$1,500 for one year. 	

Research Scholarship, Basic Science Research Program , <i>National Research Foundation of Korea</i>	2024.09 – 2025.09
<ul style="list-style-type: none"> Received a monthly research fellowship of ~\$1,000 for one year. 	
3rd Prize, Online Overseas Volunteer Program Contest , <i>Korean University Council for Social Service</i>	2022.03
Undergraduate Scholarship , <i>Ilju Scholarship Foundation</i>	2018.09 – 2024.02
<ul style="list-style-type: none"> Received full tuition scholarship for 7 semesters. 	

Extracurricular Activities

Tennis Club , Seoul National University	2021.09 – present
Growth Hackers , Business School, Seoul National University	2022.03 – 2022.12
<ul style="list-style-type: none"> Participated in 3 real-world data projects with corporate clients, each securing ~\$2,500 in funding. 	
Global SNU Social Responsibility Corps , Seoul National University	2021.06 – 2021.08
<ul style="list-style-type: none"> Joined an online volunteer program in Laos, serving as a VR team leader to produce VR contents for smart farming and heat illness prevention. 	

Skills

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

English Proficiency Scores

- 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