Jeonghwan (Jayden) Lee

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Education

09/2022 – Present **The University of Chicago**, Chicago, IL, United States.
- ◇ Ph.D. in Statistics. Advisors: Cong Ma and Chao Gao.

03/2015 – 02/2022 **Korea Advanced Institute of Science and Technology**, Daejeon, Republic of Korea.
- ◇ B.S. in Mathematical Sciences.
- ◇ Graduation with honors (Summa Cum Laude and the KAIST Presidential Award).
- ◇ Left for mandatory military service: 10/2018 – 08/2020.

Research interests

I am broadly interested in the span of statistics, econometrics, machine learning, and mathematics of data science. My research interest lies in the following disciplines:

- **Statistics & econometrics**: high-dimensional and non-parametric statistics, causal inference.
- **Machine learning (ML) & mathematics of data science**: theoretical foundations of generative models (diffusion models and LLMs), optimization, statistical learning under distribution shift.

Publications

Conference papers

C1. **Off-policy estimation with adaptively collected data: the power of online learning**.
Jeonghwan Lee and Cong Ma.
Conference on Neural Information Processing Systems (NeurIPS), Dec. 2024. (arXiv)

C2. **A Generalized Worker-Task Specialization Model for Crowdsourcing: Optimal Limits and Algorithm**.
Doyeon Kim*, **Jeonghwan Lee***, and Hye Won Chung. (∗ = equal contribution)
Proceedings of the IEEE International Symposium on Information Theory (ISIT), Jul. 2022.

Journal articles

J1. **A Worker-Task Specialization Model for Crowdsourcing: Efficient Inference and Fundamental Limits**.
Doyeon Kim*, **Jeonghwan Lee***, and Hye Won Chung. (∗ = equal contribution)
IEEE Transactions on Information Theory, Vol. 70, No. 3, pp. 2076–2117, Mar. 2024. (arXiv)

J2. **Robust Hypergraph Clustering via Convex Relaxation of Truncated MLE**.
Jeonghwan Lee, Daesung Kim, and Hye Won Chung.
IEEE Journal on Selected Areas in Information Theory, Vol. 1, No. 3, pp. 613–631, Nov. 2020. (arXiv)

Working papers

P1. **Learning bounds for doubly-robust covariate shift adaptation**.
Jeonghwan Lee and Cong Ma.
Submitted to *International Conference on Algorithmic Learning Theory (ALT 2026)*, available upon request.

P2. **Harnessing user-to-user social graphs for multi-valued rating matrix completion**.
Jeonghwan Lee.
In preparation for submission, available upon request.

Honors and awards

The 2025 Hackathon – Visionary Award (Team: JH_sqr). 09/2025
LLM Hackathon for Applications in Materials Science & Chemistry.

Doctoral Overseas Scholarship. 09/2022 – Present
Kwanjeong Educational Foundation.

The KAIST Presidential Award. 02/2022
The 2022 Commencement Ceremony of KAIST.

KAIST Math Problem Of the Week (POW) – Excellence Award. 06/2019
Department of Mathematical Sciences at KAIST.

The National College Students Mathematics Competition – Silver Prize. 12/2017
Korean Mathematical Society.

Dean's List. 09/2017
College of Natural Sciences at KAIST.

National Excellence Scholarship for Science and Engineering. 03/2017 – 06/2021
Korea Student Aid Foundation.

Department Honorary Scholarship – Awarded to the top student in the department. 03/2017
Department of Mathematical Sciences at KAIST.

Professional service

Conference reviewer Neural Information Processing Systems (NeurIPS): 2025.

Teaching experience

Teaching assistants at the University of Chicago

Winter 2025 Statistical methods and applications (STAT 22000).
Autumn 2023 Statistical methods and applications (STAT 22000).
Winter 2023 Statistical methods and applications (STAT 22000).

Work experience

Republic of Korea Air Force. 10/2018 – 08/2020
◇ Worked as an aerographer (mandatory military service).
◇ Starting position: Airman Basic / Ending position: Staff Sergeant.

Organizational activities

09/2024 – 06/2025 The University of Chicago Korean Graduate Student Association (KGSA).
- ◇ Director of General Affairs.

09/2016 – 08/2020 KAIST Undergraduate Mathematics Colloquium (KUMC).
- ◇ Colloquium organizer.

Skills

Programming skills	Python, R, C++, Java, MATLAB, LaTeX.
Languages	Korean (Native), English (Fluent), Japanese (Moderate).

References

Professor Cong Ma (congm@uchicago.edu)
- ◇ *Assistant Professor* in the Department of Statistics at the University of Chicago.

Professor Chao Gao (chaogao@uchicago.edu)
- ◇ *Professor* in the Department of Statistics at the University of Chicago.

Professor Hye Won Chung (hwchung@kaist.ac.kr)
- ◇ *Associate Professor* in the School of Electrical Engineering and the School of Computing at KAIST.