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, and causal inference.

- **Machine learning (ML) & mathematics of data science**: statistical learning under distribution shift, and theoretical understanding of foundation models.

PUBLICATIONS

Peer-reviewed conference publications

1. **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) (PDF)

2. **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. (PDF)

Journal publications

3. **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) (PDF)

4. **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) (PDF)

Preprints or submitted papers

5. **Leveraging user-to-user social similarity graphs for multi-valued rating matrix completion**.
   Jeonghwan Lee.
   Under review (available upon request), 2026.

6. **From Knowledge to Action: Outcomes of the 2025 Large Language Models (LLM) Hackathon for Applications in Materials Science and Chemistry**.
Aritra Roy et al. (A detailed list of contributors can be found in the appendix of the paper.)
Preprint (to appear on arXiv, available upon request), 2026.

7. **Learning bounds for doubly-robust covariate shift adaptation**.
Jeonghwan Lee and Cong Ma.
arXiv preprint arXiv:2511.11003, 2025. (arXiv)

Works in progress

8. **Demystifying iterative fine-tuning with verifier: when and why models provably improve and degrade**.
Joneghwan Lee, Chanwoo Park, Taekyun Lee, Cong Ma, and Asuman Özdağlar.
Working paper, 2026.

Honors and awards

The 2025 Hackathon – Visionary Award (Team: JH_sqr) (code) (PDF). LLM Hackathon for Applications in Materials Science & Chemistry.	09/2025
Doctoral Overseas Scholarship. Kwanjeong Educational Foundation.	09/2022 – Present
The KAIST Presidential Award – Award for the best academic performance. The 2022 Commencement Ceremony of KAIST.	02/2022
KAIST Math Problem Of the Week (POW) – Excellence Award. Department of Mathematical Sciences at KAIST.	06/2019
The National College Students Mathematics Competition – Silver Prize. Korean Mathematical Society.	12/2017
Dean's List. College of Natural Sciences at KAIST.	09/2017
National Excellence Scholarship for Science and Engineering. Korea Student Aid Foundation.	03/2017 – 06/2021
Department Honorary Scholarship – Awarded to the top student in the department. Department of Mathematical Sciences at KAIST.	03/2017

Professional service

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

Teaching experience

Teaching assistants at the University of Chicago

Winter 2026	Introduction to Probability Models (STAT 25300/31700).
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.