

Hanbing Liu

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Gaoling School of Artificial Intelligence (GSAI),
Renmin University of China (RUC),
Haidian District, Beijing, China

Education

- 2024-2027* **M.Phil.** in Artificial Intelligence
Gaoling School of Artificial Intelligence, Renmin University of China
Advisor: [Prof. Qi Qi](#)
- 2020-2024 **B.E.** in Computer Science and **B.A.** in Finance
Experimental Dual Degree Program, Renmin University of China
Advisor: [Prof. Jing Zhang](#), [Prof. Ju Fan](#)
Thesis: *Learn from hindsight in Text-to-SQL:
Large Language Models can gain more from supervised dataset*
GPA: 3.78/4.0 (Rank: 2/98, 2.0%)

Research Interests


I currently focus on the **Economics of Foundation Models**, through lens of mechanism design and machine learning, in this academic year. My ongoing works are about emerging commercial paradigms in the LLM era [[P1](#)–[P3](#)]. Previously, my research lies in contest design [[C1](#), [W1](#)] and LLM complex reasoning [[C2](#)–[C4](#)]. With a interdisciplinary background, I am also broadly interested in intersections between algorithmic game theory and foundation models.

Research Experience

- 2024– Research Assistant,
[Decision AI Lab](#), Renmin University of China, (Advisor: [Prof. Qi Qi](#))
Topic: Mechanism design and its intersection with foundation models.
- 2023–2025 Research Assistant,
[Knowledge Reasoning and Cognitive Learning Lab](#),
Renmin University of China, (Advisor: [Prof. Jing Zhang](#))
Topic: Large language model for coding tasks (pre-training, post-training).
- 2022–2023 Research Assistant,
[Data Lab](#), Renmin University of China, (Advisor: [Prof. Ju Fan](#))
Topic: Deep reinforcement learning for data preparation.

*Expected.

Professional Experience

- 2025- Research Intern,
 Alibaba (Mentor: [Bin Liu](#) and [Ziru Xu](#))
Topic: Bidding-aware set-wise large advertisement retrieval models.
- 2024–2025 Research Intern,
 Baidu (Mentor: [Bin Zou](#))
Topic: Mechanism design in online advertisement auctions.
- 2023 Research Intern,
 Jianxin Financial Technology (Beijing) Co., Ltd, (Mentor: [Jun Zhu](#))
Topic: Domain adaptation for Large Language Models in Text-to-SQL task.
- 2022–2023 Quantitative Strategy Researcher,
Shanghai Quant Infinite Asset Management Co., Ltd, (Mentor: [Dr. Yueguo Chen](#))
Topic: Machine learning based high-frequency trading strategies for A-shares.

Selected Awards

- 2025 Graduate Academic Excellence Scholarship, First Class
- 2024 Graduate Entrance Scholarship, First Class (1st Place)
- 2024 Outstanding Graduate of Beijing
- 2024 Industrial and Commercial Bank of China (ICBC) Scholarship
- 2023,2022 Huawei Scholarship
- 2022 Academic Excellence Scholarship, First Class (Top 3% GPA)
- 2020 Renmin University of China Programming Contest, Gold Medal (2nd Place)
- 2018 National Olympiad in Informatics in Provinces (NOIP), First Prize

Working papers

- W1. **Liu, Hanbing**, Li, W., Li, N. & Qi[†], Q. *Incentive Effects of a Cut-off Score: Optimal Contest Design with Transparent Pre-selection* Under Review. 2025.

Works in Progress

- P1. **Liu, Hanbing**., An, N. & Qi, Q. *Agentic Large Language Models with Budget Constraints*
- P2. **Liu, Hanbing**., Li, Z. & Qi, Q. *Trading Data through LLM Provision: A Mixture-of-Expert Framework*
- P3. **Liu, Hanbing**., Zhang, B., Zhu, Q. & Qi, Q. *Selling Native Advertisements in LLM-Generated Content*

Publications

 [Google Scholar](#)

*: Equal contribution, ($\alpha\beta$): Alphabetical order, [†]: Corresponding Author

Conference

- C1. **Liu, Hanbing**, Li, N., Li, W., Qi[†], Q. & Yu, C. *Less is More: Optimal Contest Design with a Shortlist* in *The Conference on Web and Internet Economics (WINE, CCF-A)* (2025).
- C2. **Liu, Hanbing**^{*}, Li^{*}, H., Zhang, X., Chen, R., Xu, H., Tian, T., Qi, Q. & Zhang[†], J. *Uncovering the Impact of Chain-of-Thought Reasoning for Direct Preference Optimization: Lessons from Text-to-SQL* in *Annual Meeting of the Association for Computational Linguistics (ACL, CCF-A)* (2025).
- C3. Chen, S., **Liu, Hanbing**, Jin, W., Sun, X., Feng, X., Fan[†], J., Du, X. & Tang, N. *ChatPipe: Orchestrating Data Preparation Pipelines by Optimizing Human-ChatGPT Interactions in Companion of the 2024 International Conference on Management of Data (SIGMOD, CCF-A)* (2024), 484–487.
- C4. Li, H., Zhang[†], J., **Liu, Hanbing**, Fan, J., Zhang, X., Zhu, J., Wei, R., Pan, H., Li, C. & Chen, H. *Codes: Towards building open-source language models for text-to-sql* in *Proceedings of the ACM on Management of Data (SIGMOD, CCF-A) 2* (ACM New York, NY, USA, 2024), 1–28.

Academic Service

Conference (Sub-)Reviewer

2026	KDD, AACL, AAMAS, ICLR
2025	IJTCS, EC, WINE, NeurIPS, KDD, COCOON
2024	WINE, KDD

Skills & Languages

Softwares Python (PyTorch, JAX, TensorFlow), C++, SQL, Bash; LLM train/inference frameworks: Transformers, vLLM, LLaMA-Factory, DeepSpeed, Triton, VeRL; Database Management: SQLite, PostgreSQL.

Languages English (CET-6), Chinese (Native).

Last updated: December 4, 2025