

Jinu Lee

Email ◇ Homepage ◇ GitHub ◇ LinkedIn

RESEARCH INTERESTS

My research focuses on **semantics of reasoning**, aiming to understand and improve natural language reasoning via neural large language models and symbolic methods. Specific topics include:

- Defining and obtaining symbolic representations that capture the nature of the reasoning tasks.
- Precisely defining reasoning ability and evaluating reasoning traces.
- Improving the reasoning capability of LLMs, from solution space-search to feedback-based learning.

EDUCATION

University of Illinois Urbana-Champaign Ph.D., Computer Science / Advisor: Julia Hockenmaier	Urbana-Champaign, IL 08/2024 - Present
Seoul National University B.S., Computer Science & Engineering	Seoul, Korea (South) 03/2018 - 08/2024

WORK EXPERIENCE

Microsoft Research Research Intern	Redmond, WA 05/2025 - 08/2025
LBOX Research Engineer	Seoul, Korea (South) 07/2023 - 06/2024
NCSoft Researcher	Seongnam, Korea (South) 07/2020 - 11/2020

- Researched on neuro-symbolic reasoning
- Developed information extraction system with legal text
- Developed Korean neural dependency parsing module for on-premise NLP pipeline

PUBLICATION (SELECTED)

- Lee, J.**, Liu, Q., Ma, R., Han, V., Wang, Z., Ji, H., Hockenmaier, J. (2025). Entailment-Preserving FOL Representations for Natural Language Entailment. *ACL 2025 Main*.
- Lee, J.**, Hwang, W. (2025). SymBa: Symbolic Backward Chaining for Structured Natural Language Reasoning. *NAACL 2025 Main*.
- Lee, J.**, Hockenmaier, J. (2025). Evaluating Step-by-step Reasoning Traces: A Survey. *Preprint*.
- Kim, S., Wu, I.*, **Lee, J.***, Yue, X., Lee, S., Moon, M., Gashteovski, K., Lawrence, C., Hockenmaier, J., Neubig, G., Welleck, S. (2025). Scaling Evaluation-time Compute with Reasoning Models as Process Evaluators. *Preprint*.
- Lee, Y.*, **Lee, J.***, Hwang, S. (2023). Learning to Rank Generation with Pairwise Partial Rewards. *EMNLP 2023 Main*.

*: equal contribution.

TEACHING, TALKS, AND SERVICE

(Talk) Coupling Formal Logic and Natural Language Reasoning Human-AI Collaborative Coding Lab @ Yonsei/KNU/UoS/SKKU	Seoul, Korea (South) 02/2025
Reviewer ACL Rolling Review (ARR)	10/2024-Present
Reviewer Conference on Language Modeling	03/2025-Present

AWARDS AND HONOURS

KFAS Overseas Ph.D. Scholarship

Awarded by *Korea Foundation of Advanced Studies* 08/2024 - Present

Presidential Science Scholarship for Undergraduates

Awarded by *Korea Student Aid Foundation* 03/2018 - 08/2023