

# Jinu Lee

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## RESEARCH INTERESTS

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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
- Fine-grained evaluation of reasoning traces
- Improving the reasoning capability of LLMs, from solution space-search to feedback-based learning

## EDUCATION

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

## WORK EXPERIENCE

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<b>Microsoft Research (RiSE)</b>	Redmond, WA
Research Intern	05/2025 - 08/2025
• Data augmentation and RL for a 32B LLM specialized in program verification and theorem proving	
<b>LBOX</b>	Seoul, Korea (South)
Research Engineer	07/2023 - 06/2024
• Neuro-symbolic reasoning and legal information extraction	
<b>NCSoft</b>	Seongnam, Korea (South)
Researcher	07/2020 - 11/2020
• Korean dependency parsers and resources	

## PUBLICATIONS

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*Conference proceedings.*

**Jinu Lee**, Julia Hockenmaier (2025). Evaluating Step-by-step Reasoning Traces: A Survey. *EMNLP 2025 Findings*.

Chaeun Kim, **Jinu Lee**, Wonseok Hwang (2025). LegalSearchLM: Rethinking Legal Case Retrieval as Legal Elements Generation. *EMNLP 2025 Main*.

**Jinu Lee**, Qi Liu, Runzhi Ma, Vincent Han, Ziqi Wang, Heng Ji, Julia Hockenmaier (2025). Entailment-Preserving FOL Representations for Natural Language Entailment. *ACL 2025 Main*.

**Jinu Lee**, Wonseok Hwang (2025). SymBa: Symbolic Backward Chaining for Structured Natural Language Reasoning. *NAACL 2025 Main*.

Youngwon Lee\*, **Jinu Lee**\*, Seung-won Hwang (2023). Learning to Rank Generation with Pairwise Partial Rewards. *EMNLP 2023 Main*.

*Preprints.*

**Jinu Lee**, Kyoung-woon On, Simeng Han, Arman Cohan, Julia Hockenmaier (2025). Evaluating Legal Reasoning Traces with Legal Issue Trees. *arXiv preprint*.

Seungone Kim, Ian Wu\*, **Jinu Lee**\*, Xiang Yue, Seongyun Lee, Mingyeong Moon, Kiril Gashteovski, Caroline Lawrence, Julia Hockenmaier, Graham Neubig, Sean Welleck (2025). Scaling Evaluation-time Compute with Reasoning Models as Process Evaluators. *arXiv preprint*.

\*: equal contribution.

## TEACHING, TALKS, AND SERVICE

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<b>(Teaching) CS440 Artificial Intelligence</b>	Urbana, IL
Teaching Assistant	08/2025-12/2025
<b>(Talk) Coupling Formal Logic and Natural Language Reasoning</b>	Seoul, Korea (South)
Human-AI Collaborative Coding Lab @ Yonsei/KNU/UoS/SKKU	02/2025
<b>(Reviewer) ACL Rolling Review (ARR)</b>	10/2024-Present
<b>(Reviewer) Conference on Language Modeling (CoLM)</b>	03/2025-Present

AWARDS AND HONOURS

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<b>KFAS Overseas Ph.D. Scholarship</b> Awarded by <i>Korea Foundation of Advanced Studies</i>	08/2024 - Present
<b>Presidential Science Scholarship for Undergraduates</b> Awarded by <i>Korea Student Aid Foundation</i>	03/2018 - 08/2023