

# Haolun Li

University of Illinois Urbana-Champaign

haolunl3@illinois.edu | lihaolun000000@gmail.com | Website | LinkedIn

## Education

**University of Illinois Urbana-Champaign**

Aug 2026 – Present

*Ph.D. in Computer Science*

Advisor: Prof. Jiaxuan You

**Tsinghua University**

Aug 2022 – Jul 2026

*B.Eng. in Computer Science and Technology* | GPA: 3.9/4.0; Ranked 1st in major

*B.Econ. in Economics and Finance* | GPA: 3.9/4.0; Ranked 1st in major

## Publications

\* *Equal contribution*

**Learning to Generate Structured Output with Schema Reinforcement Learning**

Yaxi Lu\*, **Haolun Li\***, Xin Cong, Zhong Zhang, Yesai Wu, Yankai Lin, Zhiyuan Liu, Fangming Liu, and Maosong Sun.  
*The 63rd Annual Meeting of the Association for Computational Linguistics (ACL 2025), Main Conference.*

[Paper] [Code]

**UniMem: Towards a Unified View of Long-Context Large Language Models**

Junjie Fang\*, Likai Tang\*, Hongzhe Bi, Yujia Qin, Si Sun, Zhenyu Li, **Haolun Li**, Yongjian Li, Xin Cong, Yankai Lin, Yukun Yan, Xiaodong Shi, Sen Song, Zhiyuan Liu, and Maosong Sun.

*Conference on Language Modeling (COLM), 2024.* [Paper] [Code]

## Research Experience

**THUNLP Lab, Tsinghua University**

Jun 2023 – May 2026

*Research Intern · Advised by Prof. Zhiyuan Liu.*

- **Schema RL.** Investigated schema-constrained JSON generation in LLMs, introducing SchemaBench and a reinforcement learning framework with fine-grained schema-validation rewards.
- **Coding-agent RL.** Conceived and led a coding-agent RL project targeting Terminal-Bench 2.0, independently building the RL environment and a pipeline for generating paired task queries and verifiers.
- **UniMem.** Contributed memory-method implementations to a unified study of long-context LLMs.

**Zanette's Lab, Carnegie Mellon University**

Jun 2025 – Nov 2025

*Research Intern · Advised by Prof. Andrea Zanette.*

- **Context compression.** Developed context compression with iterative RFT, achieving preliminary gains of up to 21pp on AIME 2025 under hard context-window limits.
- **Reasoning diversity.** Explored RL for diverse answers within a single response on math problems, targeting pass@k.

## Teaching Experience

**University of Illinois Urbana-Champaign**

Fall 2026

Teaching Assistant, CS 307: Modeling and Learning in Data Science

## Honors and Awards

Merit Graduate, Tsinghua University (Major rank: top 3)

2026

National Scholarship, Tsinghua University (Major rank: 1st)

2024

Comprehensive Excellence Scholarship, Tsinghua University (Major rank: top 2)

2023

## Technical Skills

**Machine Learning Frameworks:** PyTorch, Hugging Face Transformers

**LLM Training and Inference:** veRL, SGLang

**Languages:** Python, C/C++, JavaScript, TypeScript, Verilog, HTML/CSS

**Tools:** LaTeX