

Haojin Wang

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Education

University of Illinois Urbana-Champaign, Master of Computer Science (Expected)	Sept 2025 – Dec 2026
Tongji University, B.Eng in Computer Science and Technology	Sept 2021 – July 2025
National University of Singapore, Exchange Student	Jan 2024 – May 2024

Research Interest

My primary research interest generally lies in learning for **Natural Language Processing (NLP)**, encompassing both applied and fundamental research. Recently, I have been focusing on model interpretability through inference-time algorithms for Large Language Models (LLMs) and the design of self-evolving agent frameworks. I aim to contribute to the development of **safer** and **more transparent** AI systems.

Experience

Research Assistant , UC Santa Cruz – Santa Cruz, CA (<i>Remote</i>)	Feb 2025 – May 2025
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Advisor: Prof. Yuyin Zhou, Computer Science and Engineering, UC Santa Cruz

- Conducted research on medical visual question answering (VQA) benchmarks and the design of agent systems.
- Co-led the development of MedFrameQA as a co-first author. Currently leading the development of an agent system with self-evolving capabilities.

Research Assistant , University of Waterloo – Waterloo, ON (<i>Onsite</i>)	Sept 2024 – Feb 2025
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Advisor: Prof. Freda Shi, David R. Cheriton School of Computer Science, University of Waterloo

Prof. Zining Zhu, Stevens Institute of Technology

- Conducted research on next token distribution, prefix tuning and gradient-based adversarial attacks in NLP
- First Author in the project of Distribution Prompting, which provides insights into the expressiveness of Language Models and the challenges in using them as probability distribution proposers

Publications

[1] **Distribution Prompting: Understanding the Expressivity of Language Models Through the Next-Token Distributions They Can Produce** [arXiv]

Haojin Wang, Zining Zhu, Freda Shi

In: *Proceedings of the 2025 Conference on Empirical Methods in Natural Language Processing*. 2025.

[2] **MedFrameQA: A Multi-Image Medical VQA Benchmark for Clinical Reasoning** [arXiv] [project] [data]

Suhao Yu*, **Haojin Wang***, Juncheng Wu*, Cihang Xie, Yuyin Zhou

Preprint.

Extracurricular Activities

Team Leader in China Collegiate Computing Contest: 2023 Mobile Application Innovation Contest	Mar 2023 - June 2023
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- Served as the HCI designer and Idea Provider for the team work
- Obtained the second prize in East China

Team Member in 9th China Undergraduate Statistical Modeling Competition	Mar 2023 - Aug 2023
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- Served as the main code writer of the contest
- Obtained second prize

Skills

Natural Languages: Mandarin (native), English (Proficient); TOEFL 109 (R:30/L:28/S:23/W:28); GRE 328 (Verbal: 158/Quantitative: 170/Analytical Writing: 3.5)

Programming Languages:

- Proficient: C, C++, Python (2/3), MATLAB
- Capable: JavaScript, HTML/CSS, Bash, SQL

Tools/Framework: Slurm, PyTorch, Git, \LaTeX , Visual Studio, ssh, React, Vue 3

Hobbies: Fitness, Music, Movie

Awards

- **Excellent Student Scholarship Second Prize:** 3000rmb (about 413.45 USD) Dec 2023
- **National Scholarship** (as the top 5 student in the department): 8000rmb (about 1102.54 USD) July 2022