# Kunlun Zhu

<u>▶ kunlunz2@illinois.edu</u> | Github(Stars: Over 80k) | **▶** Scholar(Citations: 1800) | ♣ Personal-Web

#### Education

University of Illinois Urbana Chanpaign (UIUC)

Aug 2024 - May 2026

Master of Science in Computer Science (MSCS), GPA: 4.0/4.0

Sun Yat-Sen University (SYSU)

Aug 2015 - July 2020

B.E in Computer Science, WES Major GPA: 3.82/4.0

#### Experience

Stanford University Prof. James Zou & Dr. Pan Lu | Visiting Student

June.2025 - Present

Research on an AI scientist for scientific discovery in the Biomedical Area.

Argonne National Lab Dr. Tanjin He | Remote Research Aide

May.2025 - Present

• AI scientist for material science discovery.

UIUC | Prof. Jiaxuan You, Prof. Heng Ji | Master Student

Dec.2023 - Present

- Co-First author in a survey about Artificial General Intelligence and help host and summarize the ICLR 2024 'How far are we from AGI workshop'.
- ResearchTown Project: a multi-agent system for scientific research, helping in the dataset construction, ethical issues and paper generation.
- $\bullet \ \ \text{Team leader for Marble Project: Evaluating the Collaboration and Competition of LLM agents accepted at ACL~2025}$

ModelBest & Thunlp | Prof. Zhiyuan Liu | Research Assistant & NLP Engineer

Feb 2022 - August 2024

- Number 10th full-time employee at ModelBest startup company, as one of the initial founding members.
- Core contributor to the Tsinghua's 'QingXiaoDa': the first Tsinghua Undergraduate student AI companion assistant, took part in the data collection and evaluation process and RAG design.
- Main Participate in Open-source projects such as BMTools, XAgent, Agentverse, ChatDev, gaining over 30,000 stars in github in total
- First author or one of the main authors in 6 research papers about LLMs and their applications, having over 1000 citations in total.

Mila-Quebec AI Institute & Biogeometry Inc | Prof. Jian Tang | Research Assistant

July 2023 - December 2023

- Developed *DrugAgent*: A LLM-based RAG pipeline for drug discovery from scientific research papers and databases.
- Forming multi-agents into a structure akin to social networks for improved simulation and task-solving capabilities.
- One position paper about scientific agent safety get accepted at Nature Communications.

Carneigie Mellon University, Robotics Institute | Prof. Katia Sycara | Research Intern

July 2018 - July 2019

- Research on an enhanced object saliency map for interpretability of reinforcement agent in Atari Games.
- Influence function analysis of the agent system across its training data for the training process.

### Publications & Preprints

- 1. (EMNLP Demo 2025) "TinyScientist: A Lightweight Framework for Building Research Agents." H. Yu, K. Xuan, F. Li, K.Zhu, Z. Lei, J. Zhang, Z. Qi, J. You. Code 2025.
- 2. (EMNLP 2025 main) "SafeScientist: Toward Risk-Aware Scientific Discoveries by LLM Agents." K.Zhu, J. Zhang, Z. Qi, N. Shang, Z. Liu, P. Han, Y. Su, H. Yu, J. You. arXiv: 2505.23559 2025.
- 3. "Advances and Challenges in Foundation Agents: From Brain-Inspired Intelligence to Evolutionary, Collaborative, and Safe Systems." B. Liu, X. Li, J. Zhang, J. Wang, T. He, S. Hong, H. Liu, S. Zhang, K. Song, *K.Zhu*, Y. Cheng, et al. <a href="mailto:arXiv:2504.01990">arXiv:2504.01990</a> 2025.
- 4. (ACL 2025 main) "MultiAgentBench: Evaluating the Collaboration and Competition of LLM Agents." K.Zhu, H. Du, Z.

- Hong, X. Yang, S. Guo, Z. Wang, Z. Wang, C. Qian, X. Tang, H. Ji, J. You. arXiv: 2503.01935 2025.
- 5. (ICML 2025) "ResearchTown: Simulator of Human Research Community.' H. Yu\*, Z. Hong\*, Z. Cheng\*, K.Zhu\*, K. Xuan, J. Yao, T. Feng, J. You. <u>arXiv: 2412.17767</u>, 2024.
- (ACL 2025 main) "RAGEval: Scenario Specific RAG Evaluation Dataset Generation Framework." K.Zhu, Y. Luo, D. Xu, R. Wang, S. Yu, S. Wang, Y. Yan, Z. Liu, X. Han, Z. Liu, and M. Sun. arXiv: 2408.01262, 2024.
- 7. (ACL 2023 main) "WebCPM: Interactive Web Search for Chinese Long-form Question Answering." Y. Qin, Z. Cai, D. Jin, L. Yan, S. Liang, K.Zhu, Y. Lin, X. Han, N. Ding, H. Wang, et al. In Proceedings of the 61st Annual Meeting of the Association for Computational Linguistics, vol. 1, pp. 8968-8988, 2023. 50+ citations
- 8. (ICLR: 2024 spotlight) "Toolllm: Facilitating large language models to master 16000+ real-world apis." Y. Qin, S. Liang, Y. Ye, K.Zhu, L. Yan, Y. Lu, Y. Lin, X. Cong, et al. arXiv: 2307.16789, 2023. 500+ citations
- 9. (TMLR: 2024) "Exploring format consistency for instruction tuning." S. Liang\*, R. Tian\*, K.Zhu\*, Y. Qin, H. Wang, X. Cong, Z. Liu, X. Liu, M. Sun. Transactions on Machine Learning Research, 2023.
- 10. (Preprint) "QASnowball: An Iterative Bootstrapping Framework for High-Quality Question-Answering Data Generation." K.Zhu, S. Liang, X. Han, Z. Zheng, G. Zeng, Z. Liu, M. Sun. arXiv: 2309.10326, 2023.
- 11. (Accepted at Nature Commu) "Prioritizing Safeguarding Over Autonomy: Risks of LLM Agents for Science" X. Tang\*, Q. Jin\*, K.Zhu\*, T. Yuan\*, Y. Zhang\*, W. Zhou, M. Qu, Y. Zhao, J. Tang, Z. Zhang, A. Cohan, Z. Lu, M. Gerstein arXiv: 2402.04247, 2024.
- 12. (*ICLR*2025) "Scaling Large-Language-Model-based Multi-Agent Collaboration", C. Qian, Z. Xie, Y. Wang, W. Liu, K. Zhu\*, Y. Dang, Z. Du, W. Chen, C. Yang, Zhiyuan Liu, Maosong Sun. arXiv: 2406.07155, 2024.
- 13. (*TMLR Survey*) "How Far Are We From AGI", T. Feng\*, *K.Zhu*\*, C. Jin\*, J. Liu\*, H. Tu, Z. Cheng, G. Lin, J. You. *arXiv*: 2405.10313, 2024.
- 14. (ACM Computing Surveys) "Tool learning with foundation models." Y. Qin, S. Hu, Y. Lin, W. Chen, N. Ding, G. Cui, Z. Zeng, Y. Huang, C. Xiao, C. Han, et al. arXiv: 2304.08354, 2023. 200+ citations

## Participated OpenSource Projects

- ToolBench Benchmark for 16,000+ tool using, github 5,000+ stars
- XAgent State-of-the-art autonomous agent, github 8,000+ stars
- AgentVerse multi-agent simulation and task solving framework, github 3,300+ stars
- ChatDEV (MACNET) A multi-agent collaboration framework for software development, github 26,400+ stars
- ResearchTown A multi-agent platform for simulating and studying automatic AI research
- <u>MARBLE</u> Code for MultiAgentBench : Evaluating the Collaboration and Competition of LLM agents
- OpenManus&OpenManus RL A live stream development of RL tunning for LLM agents, github 50,000+ stars

#### Awards & Honors

- Silver Medal in Kaggle 'Feedback Prize' NLP Competition over 1557 teams (top 2.5%)
- 2019 Top 5 teams in Amazon Alexa Hackathon workshop at Carnegie Mellon University
- 2017&2018 Out-standing Student Member Award and scholarships of CS Department, Sun Yat-Sen University

#### Service & Talk

- Invited Speaker at AMD Advancing AI 2025, "Developing AI Agents with AMD GPUs" workshop
- Invited Speaker at Alibab Yunxi Conference Agent workshop about 'XAgent', 2024
- ICML 2025, ICLR 2025, ICLR 2024, NeurIPS 2024, 2025, ACL (ARR) 2024 Reviewer
- Teaching Assistant at CS107 Data Science Discovery UIUC, Fall 2024 & Spring 2025
- Serve as one of Founding Organizers of 'Foundation Agents' Organization and member of OpenBMB.