

Situo Zhang

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Last Updated in July, 2026

Research Interests

LLM Reasoning, Agentic RL, GUI Agents and Autonomous AI Scientist

Education

Shanghai Jiao Tong University <i>Ph.D. Student</i> in Computer Science and Engineering	2022/09 – Present Shanghai, China
Nanjing University <i>Bachelor of Science</i> , major in Computer Science and Technology	2018/09 – 2022/06 Nanjing, Jiangsu, China
• GPA: 4.53/5.00 • Rank: 2nd/9 (Major), Top 15% (14/97, School)	

Experience

Shanghai Artificial Intelligence Laboratory AI4Science Research Intern	2026/06 – Present
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Publications

* denotes equal contribution.

1. CharTool: Tool-Integrated Visual Reasoning for Chart Understanding
Situo Zhang*, Yifan Zhang*, Zichen Zhu, Da Ma, Lei Pan, Danyang Zhang, Zihan Zhao, Lu Chen, Kai Yu.
ACM International Conference on Multimedia (ACM MM), 2026.
2. RetroDFM: Reasoning-Driven Retrosynthesis Prediction with Large Language Models via Reinforcement Learning
Situo Zhang*, Hanqi Li*, Lu Chen, Zihan Zhao, Xuanze Lin, Zichen Zhu, Bo Chen, Xin Chen, Kai Yu.
arXiv preprint, 2025.
3. ProgRM: Build Better GUI Agents with Progress Rewards
Danyang Zhang*, **Situo Zhang***, Ziyue Yang, Zichen Zhu, Zihan Zhao, Ruisheng Cao, Lu Chen, Kai Yu.
arXiv preprint, 2025.
4. Pacer: Blockwise Pre-verification for Speculative Decoding with Adaptive Length
Situo Zhang, Yifan Zhang, Zichen Zhu, Hankun Wang, Da Ma, Danyang Zhang, Lu Chen, Kai Yu.
IEEE/ACM Transactions on Audio, Speech, and Language Processing (TASLP), 2026.

Additional Publications

1. Large Language Models Are Semi-Parametric Reinforcement Learning Agents
Danyang Zhang, Lu Chen, **Situo Zhang**, Hongshen Xu, Zihan Zhao, Kai Yu.
Advances in Neural Information Processing Systems (NeurIPS), 2023.
2. Cross-modal Large Language Models: Progress and Prospects
Lu Chen, **Situo Zhang**, Kai Yu.
Science Foundation in China, 2023. (Student first author)
3. Compressing KV Cache for Long-Context LLM Inference with Inter-Layer Attention Similarity
Da Ma, Lu Chen, **Situo Zhang**, Yuxun Miao, Su Zhu, Zhi Chen, Hongshen Xu, Hanqi Li, Shuai Fan, Lei Pan, Kai Yu.
IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2026.
4. ChemDFM-R: A Chemical Reasoner LLM Enhanced with Atomized Chemical Knowledge
Zihan Zhao, Bo Chen, Ziping Wan, Lu Chen, Xuanze Lin, Shiyang Yu, **Situo Zhang**, Da Ma, Zichen Zhu, Danyang Zhang, Huayang Wang, Zhongyang Dai, Liyang Wen, Xin Chen, Kai Yu.
arXiv preprint, 2025.
5. Fast and High-Quality Auto-Regressive Speech Synthesis via Speculative Decoding
Bohan Li, Hankun Wang, **Situo Zhang**, Yiwei Guo, Kai Yu.
IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2025.

6. Rejection Improves Reliability: Training LLMs to Refuse Unknown Questions Using RL from Knowledge Feedback
Hongshen Xu, Zichen Zhu, **Situo Zhang**, Da Ma, Shuai Fan, Lu Chen, Kai Yu.
Conference on Language Modeling (COLM), 2024.
7. Mobile-Env: Building Qualified Evaluation Benchmarks for LLM-GUI Interaction
Danyang Zhang, Zhennan Shen, Rui Xie, **Situo Zhang**, Tianbao Xie, Zihan Zhao, Siyuan Chen, Lu Chen, Hongshen Xu, Ruisheng Cao, Kai Yu.
Chinese Journal of Computers, 2026.
8. MULTI: Multimodal Understanding Leaderboard with Text and Images
Zichen Zhu, Yang Xu, Lu Chen, Jingkai Yang, Yichuan Ma, Yiming Sun, Hailin Wen, Jiaqi Liu, Jinyu Cai, Yingzi Ma, **Situo Zhang**, Zihan Zhao, Liangtai Sun, Kai Yu.
Science China Information Sciences (SCIS), 2025.
9. MobA: Multifaceted Memory-Enhanced Adaptive Planning for Efficient Mobile Task Automation
Zichen Zhu, Hao Tang, Yansi Li, Dingye Liu, Hongshen Xu, Kunyao Lan, Danyang Zhang, Yixuan Jiang, Hao Zhou, Chenrun Wang, **Situo Zhang**, Liangtai Sun, Yixiao Wang, Yuheng Sun, Lu Chen, Kai Yu.
Conference of the Nations of the Americas Chapter of the Association for Computational Linguistics, System Demonstrations (NAACL), 2025.
10. IEA: Amateur-Friendly Conversational Image Editing Agent via Three Stages of Multitask Alignment
Zichen Zhu*, Yuheng Sun*, Mingxuan Zhu*, Wenjie Ma, **Situo Zhang**, Zhexiang Wang, Ziyue Yang, Danyang Zhang, Kunyao Lan, Zihan Zhao, Dingye Liu, Siqi Xiang, Lu Chen, Kai Yu.
Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) Findings, 2026.
11. No Action Without a NOD: A Heterogeneous Multi-Agent Architecture for Reliable Service Agents
Zixu Yang*, Hang Zheng*, Nan Jiang, Zhiyang Tang, **Situo Zhang**, Xiaobao Wu, Lu Chen, Kai Yu.
arXiv preprint, 2026.
12. AdaEAGLE: Optimizing Speculative Decoding via Explicit Modeling of Adaptive Draft Structures
Situo Zhang, Hankun Wang, Da Ma, Zichen Zhu, Lu Chen, Kunyao Lan, Kai Yu.
arXiv preprint, 2024.

Awards and Scholarships

- **Zhiyuan Honors Program, Shanghai Jiao Tong University** 2022 – Present
Selected from fewer than 100 incoming PhD students annually
- **Outstanding Graduate, Nanjing University** 2022
Awarded to the Top 10% of all graduates
- **Lu Dexin Award, Nanjing University** 2022
The highest honor awarded by Kuang Yaming Honors School, Nanjing University
- **Huawei Scholarship, Nanjing University** 2021
Awarded to only 2 Junior/Senior students
- **Special Scholarship for Undergraduates in Basic Science, Nanjing University** 2021
Awarded to the Top 5% of students in the “Top-notch Talent Program”
- **Outstanding Student Award, Nanjing University** 2021
Awarded to the Top 5% of all students
- **Elite Program Scholarship, First Prize, Nanjing University** 2020
Awarded to the Top 15% of students in the “Top-notch Talent Program”

Academic Services

Reviewer for conferences including *ICML*, *NeurIPS*, *EMNLP*, *NAACL*, *COLM*, *etc.*

Reviewer/Co-reviewer for journal *Nature*, *Nature Communications*, *TMLR*.

Teaching

Teaching Assistant, *Natural Language Processing*

Fall, 2023

Teaching Assistant, *Discrete Mathematics*

Spring, 2024