ZHENNAN SHEN

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Research

Research Interests: *LLM, Computer Use Agent, Agentic RL*

Zhennan's research centers on **language model agents** and **agentic reinforcement learning (RL)**, asking: (1) how RL can further enhance agents' capabilities in exploration, planning, and generalization; (2) how to design robust, human-aligned evaluation frameworks for agents; and (3) how to build scalable data synthesis pipelines for continual agent improvement.

Education Experience

Shanghai Jiao Tong University   **Shanghai, China**
B.E. in Computer Science & Engineering   *Sep 2021 – Jun 2025*
- **Major GPA:** 3.9/4.3, **Ranking:** 22/127
- Honored with the **Zhiyuan Honors Scholarship** and the title of **Outstanding Graduate**.

Publications and Preprints

- [1] Yiheng Xu[*], Dunjie Lu[*], **Zhennan Shen (Co-Lead)**[*], Junli Wang, Zekun Wang, Yuchen Mao, Caiming Xiong, Tao Yu. **AgentTrek: Agent Trajectory Synthesis via Guiding Replay with Web Tutorials**. In *ICLR 2025 Conference <Spotlight>*.

- [2] Xinyuan Wang, Bowen Wang, Dunjie Lu, Junlin Yang, Tianbao Xie, Junli Wang, Jiaqi Deng, Xiaole Guo, Yiheng Xu, Chen Henry Wu, **Zhennan Shen**, *et al.* **OpenCUA: Open Foundations for Computer-Use Agents**. In *NeurIPS 2025 Conference <Spotlight>*

- [3] Zhang Danyang, **Shen Zhennan**, Xie Rui, Zhang Situo, Xie Tianbao, Zhao Zihan, Chen Siyuan, Chen Lu, Xu Hongshen, Cao Ruisheng, Yu Kai. **Mobile-Env: Building Qualified Evaluation Benchmarks for LLM-GUI Interaction**. In submission to *AAAI 2026 Conference*, arXiv preprint 2305.08144, 2023.

- [4] Yanshu Li, Jianjiang Yang, **Zhennan Shen**, Ligong Han, Haoyan Xu, Ruixiang Tang. **CATP: Contextually Adaptive Token Pruning for Efficient and Enhanced Multimodal In-Context Learning**. In submission to *AAAI 2026 Conference*, arXiv preprint 2508.07871, 2025.

- [5] Sun Liangtai, Han Yang, Zhao Zihan, Ma Da, **Shen Zhennan**, Chen Baocai, Chen Lu, Yu Kai. **Scieval: A Multi-Level Large Language Model Evaluation Benchmark for Scientific Research**. In *Proceedings of the AAAI Conference on Artificial Intelligence*, 2024.

- [6] Sun Liangtai, Luo Danyu, Ma Da, Zhao Zihan, Chen Baocai, **Shen Zhennan**, Zhu Su, Chen Lu, Chen Xin, Yu Kai. **SciDFM: A Large Language Model with Mixture-of-Experts for Science**. In *NeurIPS 2024 Workshop FM4Science*, 2024.

Research Experience

HKU NLP Group   **The University of Hong Kong (HKU)**
Summer Internship under the supervision of Prof. Tao Yu   *Jul 2024 – Sep 2024*
- Focused on LLM-based GUI Agents and Large-Scale Data Synthesis for Agent Training. Served as **Co-Lead Author** of *AgentTrek* [1] and contributor to *OpenCUA* [2], developing scalable pipelines for agent trajectory synthesis and building open foundations for Computer-Use Agents (CUA).

X_LANCE Lab   **Shanghai Jiao Tong University (SJTU)**
Internship under the supervision of Prof. Lu Chen and Prof. Kai Yu   *Jul 2023 – Jul 2024*
- Focused on LLM Agents and AI for Science (AI4Sci). Contributed to *MobileEnv* [3] for GUI-agent evaluation, and participated in *SciDFM* [6] and *SciEval* [5] on scientific LLM development and benchmarking.

Internship Experience

*Moonshot AI (Kimi)   **Beijing**
Intern Focused on RL and SFT in Agent Training   *Mar 2025 – Present*
- **Optimization of Reinforcement Learning (RL) Workflows for Advanced Agent Training**
  - GUI agents which interact with GUI environment as humans are emerging as the next-gen Computer Use Agents (CUA), with RL offering a promising path to tackle their challenges in perception, reasoning and grounding.
  - Participated in **RL model training**, **infrastructure optimization**, and **automated scaling of training data**.
- **Supervised Fine-Tuning (SFT) Dataset Curation, Regeneration, and Evaluation**
  - Utilized a fully annotated proprietary dataset to investigate upper-bound performance of SFT.
  - Contributed to the full SFT pipeline encompassing **data curation and augmentation**, **sample regeneration**, and **quantitative + qualitative evaluation** of fine-tuning outcomes.
- **The work involved shall be released soon via the technical report of Kimi K2-VL**