Junli Wang

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Education

Tsinghua University, Beijing, China   09/2021 – 07/2025
B.Eng. in Computer Science and Technology, GPA: 3.92/4.00

Publications

(* stands for equal contribution)
[1] **(ICLR25' Under Review)** Aguvis: Unified Pure Vision Agents for Autonomous GUI Interaction.
Yiheng Xu*, Zekun Wang*, **Junli Wang***, Dunjie Lu, Tianbao Xie, Amrita Saha, Doyen Sahoo, Tao Yu, Caiming Xiong
[Page] [PDF]
[2] **(ICLR25' Under Review)** AgentTrek: Agent Trajectory Synthesis via Guiding Replay with Web Tutorials.
Yiheng Xu*, Dunjie Lu*, Zhennan Shen*, **Junli Wang**, Zekun Wang, Yuchen Mao, Caiming Xiong, Tao Yu
[PDF]

Research Experience

XLang Lab, The University of Hong Kong   Hong Kong
Research Assistant to Prof. Tao Yu   04/2024 – 12/2024
Topic: **Multimodal Computer Use Agents**

Projects

OSWorld: Benchmarking Multimodal Agents for Open-Ended Tasks in Real Computer
Environments   06/2024 – 10/2024
- Established a comprehensive benchmark framework with 369 diverse real-world tasks in an authentic operating system environment.
- Engineered a scalable Docker-based testing infrastructure with parallel execution capabilities, achieving 8x throughput improvement in agent evaluation.

AgentNet: Scaling Multimodal Agent Trajectories Data   06/2024 – 10/2024
- Architected and implemented AgentNet, a pioneering platform for large-scale collection and processing of multimodal agent trajectories from natural human-computer interactions.
- Spearheaded the development of extensive technical documentation and interactive user guides at AgentNet Documentation.

AgentTrek: Agent Trajectory Synthesis via Guiding Replay with Web Tutorials 04/2024 – 09/2024
- Developed an innovative end-to-end trajectory synthesis framework incorporating automated GUI tutorial extraction, high-fidelity BrowserGym simulation, and VLM-powered trajectory evaluation.
- Engineered a novel tutorial-guided replay mechanism that leverages web tutorials as demonstration data, achieving 100x cost reduction compared to manual annotation while maintaining trajectory quality and task completion effectiveness.

Internships

Alibaba Qwen Team   Beijing
Research Engineer, Advisor: Binyuan Hui   11/2024 – Present
Research Topic: Constructing an agent system using enhanced reasoning and planning.

Selected Awards and Honors

Scholarship
- THU Comprehensive Excellence Award   2024
- THU Comprehensive Excellence Award   2023

Awards
- Meritorious Winner in Mathematical Contest in Modeling   2023
- First Prize in National College Student Mathematics Contest   2022

Additional Information

Skills
- **Deep Learning Tools:** PyTorch, Deepspeed
- **High Performance Computing Frameworks:** Cuda, vLLM

Selected Courses
- Machine Learning (A+), Artificial Neural Networks (99/100), Probability and Statistics (100/100), High Performance Computing (A)