Haoran Wang

+86-18660816182 · ubecwang@gmail.com · UbeCc · Python / Typescript / Rust

Education Background

Tsinghua University / *Mechanical Engineering (Major Changed)* 2022.09 – 2023.06

Tsinghua University / *Computer Science and Technology (Bachelor)* 2023.09 – 2026.06(Expected)

Working Experience

Peng Cui's TrustworthyAI Research Group 2023.09 – 2024.06

Research Assistant | Generalization of Deep Learning Models

- Conducted research on Transformers' generalization capabilities in in-context learning.
- Designed and evaluated object detection models for out-of-domain tasks based on DeTR.

THU-KEG & Beijing Zhipu Huazhang Technology Co Ltd 2024.07 – Present

Internship | Reinforcement Learning Engineer for Large Language Models

- Implemented Monte Carlo Tree Search (MCTS) for reasoning tasks, improving accuracy by 5%+ on MATH500.
- Performed Iterative-DPO and Self-Critic techniques on mathematical benchmarks, achieving state-of-the-art results.
- Built a scalable pipeline for software engineering agent post-training, working on RL for SWE(Software Engineering).

Project Experience

Shape Control of Deformable Linear Objects *Leader* 2024.04 – 2024.06

Proposed a deep RL-based method for controlling the shape of deformable linear objects, applicable to soft robotics.

OpenHands(53.0k🌟) *Contributor* 2024.10 – Present

OpenHands (formerly OpenDevin), is a platform for software development agents. I contributed to the stability.

OpenRLHF(6.3k🌟) *Core Contributor* 2024.11 – Present

OpenRLHF is a RLHF framework. I contributed to ring-attention implementation as well as multi-turn, lora etc.

verl(6.8k🌟) *Contributor* 2025.02 – Present

verl is a flexible, efficient, and production-ready RL training library for LLMs, developed by ByteDance. Improved RL scalability and modularity. I contributed to multi-turn agentic RL.

SGLang(13.3k🌟) *Contributor* 2025.03 – Present

SGLang is a fast serving framework for LLMs. I contributed to the support for verl at link.

Publications

Xingxuan Zhang*, **Haoran Wang***, Jiansheng Li, Yuan Xue, Shikai Guan, Renzhe Xu, Hao Zou, Han Yu, Peng Cui. *Understanding the Generalization of In-Context Learning in Transformers: An Empirical Study*, ICLR 2025.

Haoran Wang*, Zhenyu Hou*, Yao Wei*, Jie Tang, Yuxiao Dong. *SWE-Dev: Building Software Engineering Agents with Training and Inference Scaling*, ACL'25 Findings.

Chonghan Liu*, **Haoran Wang***, Felix Henry, Pu Miao, Yajie Zhang, Yu Zhao, Peiran Wu. *MIRAGE: A Multi-modal Benchmark for Spatial Perception, Reasoning, and Intelligence*, Under Peer-Review.

Wendong Xu*, Jing Xiong*, Chenyang Zhao, Qiujiang Chen, **Haoran Wang**, Hui Shen, Zhongwei Wan, Jianbo Dai, Taiqiang Wu, He Xiao, Chaofan Tao, Zhuoqing Mao, Ying Sheng, Zhijiang Guo, Hongxia Yang, Bei Yu, Lingpeng Kong, Quanquan Gu, Ngai Wong. *SwingArena: Competitive Programming Arena for Long-context GitHub Issue Solving*, Under Peer-Review.

Jian Hu, Xibin Wu, Wei Shen, Jason Klein Liu, Zilin Zhu, Weixun Wang, Songlin Jiang, **Haoran Wang**, Hao Chen, Bin Chen, Weikai Fang, Xianyu, Yu Cao, Haotian Xu, Yiming Liu. *OpenRLHF: An Easy-to-use, Scalable and High-performance RLHF Framework*, Under Peer-Review.

Scholarship

Comprehensive Excellent Scholarship 2023.11

Social Work Scholarship 2024.11

Expertise

- Proficient in Linux development environment and common shell commands.
- Skilled in Python, Typescript, Rust, learning CUDA now and familiar with deep learning frameworks such as PyTorch.
- TOEFL 102, and capable of communicating in full English.

Social Work

Member of Yueyan Studio, a group for teaching communication and expression skills 2023.08 – Present

Committee in Student Q&A Forum, DCST 2023.11 – 2024.07

Leader of Network Department, Student Association for Science and Technology, DCST 2024.07 – Present

Self Review

I am passionate about combining research and engineering to solve real-world AI challenges. My experience spans reinforcement learning, scalable system, and collaborative teamwork, with a focus on impactful solutions in the AI domain.

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