

Shi Yu

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Education

IIS, Tsinghua University

Aug 2025 – Present

Undergraduate Study

IIS, Tsinghua University

Feb 2024 – Jun 2025

Pre-College Program

Research Interests

LLMs(LLM Agent), Reinforcement Learning

Research Experience

Undergraduate Research in LLM Agent

Beijing, China Jun

Supervised by Professor Yi Wu and Yu Wang, Tsinghua University

2025 – Present

- Evaluated the performance of Large Language Models (LLMs) on International Mathematical Olympiad (IMO) problems and developed a multi-step reasoning system for enhanced solving capabilities.
- Measured the core competencies of LLMs on advanced reasoning tasks including IMO and IPHO questions by employing an ICPL (In-context Preference Learning) framework, which incorporated human feedback.

Undergraduate Research in RLHF

Beijing, China Feb

Supervised by Professor Yi Wu and Yu Wang, Tsinghua University

2025 – Jun 2025

- Gained hands-on research experience in RLHF by investigating and enhancing the reinforcement learning efficacy of LLMs trained on non-transitive human preference datasets.

Robotics Intern

Shenzhen, China Aug

Supervised by Yuchuan Wang, Tencent

2025

- Investigated robotics applications by leveraging a large language model (LLM) to successfully complete a robot indoor navigation task.

Publications

Awards

Freshman Scholarship (Second Prize)

2025

Tsinghua University

Gold Medal (Top 10)

2023

40th Chinese Physics Olympiad

Silver Medal
39th Chinese Physics Olympiad

2022

Projects

Technical Skills

Programming Languages: Python, C/C++, Bash, Assembly, Scala

Tools & Frameworks: PyTorch, JAX, MATLAB, Git, LaTeX, Docker, GDB, SQL

Languages: English (Fluent), Chinese (Native)