

Zhiqi Chen

Department of Automation, Tsinghua University, Beijing, China

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Education

- **Dept. of Automation, Tsinghua University**
B.Eng. Candidate in Automation

Beijing, China
Aug 2023 – Present

- GPA: 4.0/4.0 (Rank 1/173, until *Jul 2026*),
 - **A+** in Data Structure, Discrete Mathematics, Random Mathematics and Statistics, Linear Algebra, Computer Languages and Programming, Operations Research, Physics for Scientists and Engineers, etc.
 - Research Advisor: Prof. Gao Huang (LeapLab)
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Research Interests

- Reinforcement Learning for Reasoning (LLMs and MLLMs) & Long-Horizon Reasoning and Generalization
 - Embodied AI (World Models)
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Research Experience

- **Impossible Inc.**
Research Intern

CA, USA
Jul 2026 – present

Ongoing Project on World Models

- **LeapLab, Tsinghua University**
Research Intern

Beijing, China
Feb 2025 – present

Project: Does Reinforcement Learning Really Incentivize Reasoning Capacity in LLMs Beyond the Base Model?

- Investigated whether reinforcement learning with verifiable rewards (RLVR) genuinely increases reasoning capacity in large language models beyond their base pretrained models.
- Conducted substantial large-scale RL experiments, including *pass@k* evaluation across models and benchmarks, and the perplexity analysis.
- Demonstrated structural limits of RLVR in expanding intrinsic reasoning capacity, challenging prevailing assumptions about post-training scaling.
- Co-first author to a NeurIPS 2025 Oral paper (Best Paper Runner-Up, get a unique perfect score 6666).

Project: Further Project in RL for Reasoning LLMs (Coming Soon)

- **Physical AI Research**
Research Intern

Beijing, China
Jul 2025 – Sept 2025

Project: Learning Push-Grasp Synergy for Occluded Objects in Cluttered Environments

- Studied reinforcement learning methods for coordinated push-grasp manipulation in cluttered robotic environments.
 - Bridged the sim-to-real gap by deploying algorithms on physical hardware for experimental validation.
 - Contributed to research accepted at ICRA 2026.
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Publications

- **Does Reinforcement Learning Really Incentivize Reasoning Capacity in LLMs Beyond the Base Model?**
Yang Yue*, **Zhiqi Chen***, Rui Lu, Andrew Zhao, Zhaokai Wang, Shiji Song, Gao Huang
NeurIPS 2025 (Oral, Best Paper Runner-Up Award, perfect score 6666)
ICML 2025 AI4Math Workshop (Oral, Best Paper Award)
- **Learning Push-Grasp Synergy for Occluded Objects in Cluttered Environments**
Ziang Li, Haorui Wu, **Zhiqi Chen**, Haozhe Zhang, Yuzhe Huang, Changshui Zhang
ICRA 2026

Honors & Awards

- SenseTime Scholarship (2026) (for 30 undergraduate students per year, by SenseTime)
- National Scholarship of China (2025 & 2024)
- Person of the Year, Dept. of Automation, Tsinghua Univ. (2025)
- Huang-Yicong AGI Scholarship, Tsinghua Univ. (2025)
- Zheng-Weimin Scholarship (First Prize), Tsinghua Univ. (2025)

Technical Skills

- **Programming:** Python, C, C++, $\LaTeX$
- **Research Areas:** Reinforcement Learning, LLM Post-training, RLVR, Embodied Manipulation

Leadership & Activities

- **THU Tong Class (AGI Class)**
Student *Feb 2024 – Present*
 - Advanced AI training program focusing on AGI-related research and interdisciplinary scientific training.
- **Men’s Football Team, Dept. of Automation, THU**
Player *Season 26-27*
Captain *Season 25-26*
Player *Season 24-25 & 23-24*
 - Competing in THU Football League.