BOHAN LYU UNDERGRADUATE

lyubh22@gmail.com
https://www.lyubh.cn

EDUCATION

Tsinghua University — Beijing, China
Dual Major: Computer Science and Technology & Economics and Finance — 2022 - 2026
- **GPA**: 3.9/4.0, **Rank**ed 6-th among dual major students.
- **Selected A Courses:** Data Mining ($A+$, Top 1), ODE ($A+$, Top 1), Artificial Intelligence, Computer Graphics, Linear Algebra (Advanced), Discrete Mathematics, Econometrics, Intermediate Microeconomics, Computational Humanities and Social Sciences, Computer Networks, Linear Algebra, Calculus A(2), etc.
- **Academic Interests:** ML, NLP, AI4Science.

RESEARCH EXPERIENCES

Chi Jin's Group, Princeton | Remote — 2024.11 - Present
- Research intern, advised by Prof. Chi Jin. Working with Dr. Yong Lin.
- Working on autonomous math theorem proving with formal language.

Rose Spatiotemporal Lab, UCSD | San Diego, CA, USA — 2024.07 - 2024.11
- Research intern, advised by Prof. Rose Yu. Worked with Dr. Yadi Cao.
- Worked on aligning large language models with the physical world.

Tsinghua NLP Lab | Beijing, China — 2023.07 - Present
- Led **Agent Imitation Learning** and **OpenAgent** projects, member of **XAgent** team.
- Exploring multimodal learning and the applications of large models in natural sciences domain.

PUBLICATIONS AND PROJECTS

1. **Bohan Lyu**⋆, Siqiao Huang, Zichen Liang. **SURGE: On the Potential of Large Language Models as General-Purpose Surrogate Code Executors**. Preprint, 2025.

2. Yong Lin⋆, Shange Tang⋆, **Bohan Lyu**, Jiayun Wu, Hongzhou Lin, Kaiyu Yang, Jia Li, Mengzhou Xia, Danqi Chen, Sanjeev Arora, Chi Jin. **Goedel-Prover: A Frontier Model for Open-Source Automated Theorem Proving**. Technical Report, 2025.

3. **Bohan Lyu**⋆, Yadi Cao⋆, Duncan Watson-Parris, Leon Bergen, Taylor Berg-Kirkpatrick, Rose Yu. **Adapting While Learning: Grounding LLMs for Scientific Problems with Intelligent Tool Usage Adaptation**. *AAAI Fall Symposium Series (Oral)*, 2024. *Main Conference Under Review..*

4. **Bohan Lyu**⋆, Xin Cong⋆, Heyang Yu, Pan Yang, Yujia Qin, Yining Ye, Yaxi Lu, Zhong Zhang, Yukun Yan, Yankai Lin, Zhiyuan Liu, Maosong Sun. **Enhancing LLM's Capabilities in Open Domains via Autonomous Tool Integration**. Under Peer Review, 2023.

AWARDS AND HONORS

- **No. 1/636**, Baidu Inc. Data Mining Competition (Loan Default Prediction) — 2024.06
- **First Prize**, National College Student Mathematical Modeling Contest (Beijing) — 2023.10
- **Second Place & Newcomer Prize**, Tsinghua University's Challenge Cup — 2024.04
- **Best Paper of Popularity**, Contest of Scientific Communication — 2024.05
- **Team Gold Prize**, Digital Economy Research Project — 2023.11
- **Third Place**, Tsinghua University's Business Imitation Contest — 2022.10

GRANTS

- **Global Exploration Initiative**, ¥20,000, Grade A — 2024.04
- **Academic Advancement Program**, ¥20,000, Grade B — 2024.05
- **'Sparking Program'**, ¥15,000 — 2024.05
- **Student Research Training**, ¥5,000 — 2024.05
- **Technology Innovation Excellence Scholarship**, ¥5,000 — 2024.11
- **Tsinghua University's Challenge Cup**, ¥3,000 — 2024.03

SKILLS

Languages: English, Chinese.

Programming: Python, C/C++, System Verilog, LaTeX, MATLAB, etc.

Tools: Ray, DeepSpeed, vllm, Docker, etc.

ACADEMIC SERVICES

Reviewers for: *ICLR 2025, LLMAgents @ ICLR 2024, AI4MATH @ ICML 2024.*

Member of 'Sparking Program', the most prestigious and selective academic organization at Tsinghua University.