

EDUCATION

Tsinghua University Beijing, China
Dual Major: Computer Science and Technology & Economics and Finance 2022 - 2026

- **GPA:** 3.9/4.0, **Ranked** 1-st (4.00/4.00) for the past year.
- **Selected A Courses:** Data Mining (A+, Top 1), Ordinary Differential Equation (A+, Top 1), Game Theory and Mechanism Design, Probability and Statistics, Artificial Intelligence, Advanced Linear Algebra, Discrete Mathematics, Computational Humanities and Social Sciences, Computer Networks, Computer Graphics, Calculus A(2), etc.
- **Academic Interests:** ML, NLP (AI for Math, ML for NLP).

RESEARCH EXPERIENCES

Princeton Language and Intelligence (PLI), Princeton | Remote 2024.11 - Present

- Research intern, advised by Prof. Chi Jin. Worked with Dr. Yong Lin.
- Working on automated 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 - 2024.06

- Led **Agent Imitation Learning** and **OpenAgent** projects, member of **XAgent** team.
- Exploring multimodal learning and the applications of large models in the natural sciences.

PUBLICATIONS

1. 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.** *International Conference on Machine Learning (ICML) 2025, AAAI Fall Symposium Series (Oral) 2024.*
2. Yong Lin*, Shange Tang*, Bohan Lyu*, Ziran Yang*, Jui-Hui Chung*, Haoyu Zhao*, Lai Jiang*, Yihan Geng*, Jiawei Ge, Jingruo Sun, Jiayun Wu, Jiri Gesi, Ximing Lu, David Acuna, Kaiyu Yang, Hongzhou Lin, Yejin Choi, Danqi Chen, Sanjeev Arora, Chi Jin[†]. **Goedel-Prover-V2: Scaling Formal Theorem Proving with Scaffolded Data Synthesis and Self-Correction.** *AI4Math @ ICML (Oral) 2025.*
3. 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.** *Proceedings of Annual Meeting of the Association for Computational Linguistics (ACL Main) 2025.*
4. 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.** *Conference on Language Modeling (COLM) 2025.*
5. Bohan Lyu*[†], Siqiao Huang*, Zichen Liang*, Qi-An Sun, Jiaming Zhang. **SURGE: On the Potential of Large Language Models as General-Purpose Surrogate Code Executors.** *Proceedings of Conference on Empirical Methods in Natural Language Processing (EMNLP Main) 2025.*

AWARDS

- **Spark Scientific and Technological Innovation Fellowship (Top 1% in Tsinghua)** 2024.05
- **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 in Tsinghua 2024.05
- **Academic Advancement Program**, Excellent Program 2024.11
- **Scientific and Technological Innovation Excellence Scholarship** 2024.11

ACADEMIC SERVICES

Vice President of *the Student Association for Science and Technology*, SEM, Tsinghua University.

Reviewers: *ARR Feb./May 2025, ICLR 2025, LLMAgents @ ICLR 2024, AI4MATH @ ICML 2024.*

Volunteer: *ICML 2025.*

INTERN EXPERIENCES

Quantitative Research Department, China Securities | Beijing, China 2023.07 - 2023.09

- Worked on Microsoft Qlib and optimized algorithms including TCTS, TRA, HIST, etc.
- Independently completed a survey on “Application of Diffusion Models in Temporal Data Analysis”.

SKILLS

Languages: English, Chinese.

Programming: Python, C/C++, System Verilog, LEAN4.

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