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**: 3.83/4.00, **Rank**ed 6-th among dual major students.
- **Selected A Courses:** Data Mining ($A+$, Top 1), Artificial Intelligence, Computer Graphics, Linear Algebra (Advanced), Discrete Mathematics, Econometrics, Intermediate Microeconomics, Computational Humanities and Social Sciences, Object-Oriented Programming, Linear Algebra, Calculus A(2), etc.
- **Academic Interests:** NLP, AI4Science.

RESEARCH EXPERIENCES

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

Tsinghua NLP Lab | Beijing, China — 2023.07 - Present
- Led IDM and SciAct projects and contributed to XAgent team.
- Explored multimodal agents and the applications of large models in the natural sciences domain.

Quantitative Research Dept., China Securities | Beijing, China — 2023.07 - 2023.09
- Worked on Microsoft Qlib and optimized neural networks and algorithms including TCTS, TRA, HIST, etc.
- Independently studied and completed a survey on "Application of Diffusion Models in Temporal Data Analysis".

PUBLICATIONS AND PROJECTS

1. **Bohan Lyu,** Yadi Cao, Duncan Watson-Parris, Leon Bergen, Taylor Berg-Kirkpatrick, Rose Yu. **Towards Grounding Large Language Models with the Physical World.** *AAAI Fall Symposium Series (Oral)*, 2024.

2. **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
- **Student Research Training,** ¥5,000 — 2024.05
- **'Sparking Program',** ¥5,000 — 2024.05
- **Tsinghua University's Challenge Cup,** ¥3,000 — 2024.03

SKILLS

Languages: English, Chinese.

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

Tools: DeepSpeed, Git, Shell, Vim, Docker, SQL, Django, ReAct, Flask, ssh, gdb/pdb, etc.