

XINMIAO YU

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RESEARCH INTEREST

My current interest focuses on agents with continual adaptation and self-improvement, while ensuring robustness and trustworthiness in human-AI interaction.

EDUCATION

Harin Institute of Technology *C9 First-class* Harbin, China Sep. 2023 – March. 2026(expected)
M.sc School of Computer Science Supervisor: [Prof.Bing Qin](#) *National Scholarship*

Politecnico di Milano, Milano, Italy Sep. 2024 – Jun. 2025(expected)
M.sc Department of Computer Science *Courses* Deep Learning/Natural Language Processing

Harin Institute of Technology *C9 First-class* Harbin, China Sep. 2019 – Jun. 2023
B.Sc School of Computer Science GPA: 3.78 (5/83) *National Scholarship, Outstanding Graduate*

UCLA Los Angeles, United States Mar. 2023-Jun. 2023
Visiting Student *Courses* Machine Learning A Behavioral Finance A+ Principles of Accounting A

SELECTED PUBLICATIONS

1. **Xinmiao Yu**, Xiaocheng Feng, Yun Li, Minghui Liao, Ya-Qi Yu, Xiachong Feng, Weihong Zhong, Ruihan Chen, Mengkang Hu, Jihao Wu, Duyu Tang, Dandan Tu, Bing Qin*. Cross-Lingual Text-Rich Visual Comprehension: An Information Theory Perspective. [[AAAI 2025](#)]
2. Mengkang Hu, Yao Mu, **Xinmiao Yu**, Mingyu Ding, Shiguang Wu, Wenqi Shao, Qiguang Chen, Bin Wang, Yu Qiao, Ping Luo*. Tree-Planner: Efficient Close-loop Task Planning with Large Language Models [[arxiv](#)][[ICLR 2024](#)]
3. **Xinmiao Yu**, Meng Qu, Xiaocheng Feng, Bing Qin*. GraphAgent: Exploiting Large Language Models for Interpretable Learning on Text-attributed Graphs. [[arxiv](#)]
4. Zhangyin Feng, Yuchen Ren, **Xinmiao Yu**, Xiaocheng Feng, Duyu Tang, Shuming Shi, Bing Qin*. Improved Visual Story Generation with Adaptive Context Modeling: [ACL 2023](#)
5. Xuehui Yu, Jingchi Jiang, **Xinmiao Yu**, Yi Guan*, Xue Li. Causal Coupled Mechanisms: A Control Method with Cooperation and Competition for Complex System. [BIBM 2022](#)

PROFESSIONAL EXPERIENCE

Qwen Hangzhou, China Jul. 2025 – Now

Research Intern Supervisors: Yong Jiang and Liwen Zhang

- Conducted core research on developing DeepResearch [[Github](#) 16k stars] comparable to OpenAI.
- Implemented an asynchronous RL infrastructure to accelerate the training process of LLM agents.
- Proposed a tree-structured memory optimization method to compress trajectories in RL-based agents.

Deloitte Shanghai, China Jul. 2024 – Sep. 2024

AI Technology Solution Intern Supervisors: Yikai Guo and Ramphis Yang

- Built a generative translation agent powered by LLMs, improving brand consistency and accuracy by 20%.
- Optimized LLM performance through fine-tuning and RAG, aligning with business needs.

HUAWEI Shanghai, China Oct. 2023 – Aug. 2024

Research Intern Supervisors: [Duyu Tang](#) and [Prof. Xiaocheng Feng](#)

- Advanced the capabilities of vision-language models by developing innovative training and evaluation methods, improving OCR and reasoning performance on text-rich images.
- Designed and benchmarked cross-lingual visual QA datasets, uncovering key challenges in language-agnostic visual representation for Multimodal LLMs.
- Enhanced cross-lingual vision-language understanding by maximization of vision-language cross-lingual mutual information.

Mila-Quebec AI institute Quebec, Canada

June. 2023 – Oct. 2023

Research Intern Supervisor: [PhD.Meng Qu](#)

- Developed GraphAgent, leveraging LLMs for text-attributed graph learning, achieving state-of-the-art performance with improved interpretability.
- Designed a policy-driven framework where an LLM-based agent performs state-action planning, advancing graph understanding and decision-making.

University of Southern California GLAMOR lab Los Angeles, U.S.

May. 2023 – Present

Research assistant Supervisors: [Prof. Jesse Thomason](#) and [PhD. Ishika Singh](#)

- Scene Graph Construction: Developed an automated scene graph pipeline that enabled robots to autonomously construct and refine 3D maps from interactions, enhancing scene accuracy and robot autonomy.
- Task Planning Innovation: Integrated a Chain-of-Thought methodology in task planning, significantly improving planning precision and efficiency.

HIT SCIR Lab Harbin, China

Jun. 2022 – Jan. 2023

Master candidate Supervisors: [Prof. Xiaocheng Feng](#) and [PhD. Zhangyin Feng](#).

- Enhanced visual story generation by introducing adaptive context modeling, improving the handling of historical context and narrative coherence.
- Achieved state-of-the-art performance in story visualization and continuation tasks, setting new benchmarks for consistency and quality.

TECHNICAL SKILLS

Python, Java, C++, Pytorch, SQL, Latex

TEACHING

- *Advanced Programming*: Mentored students in coding practices and software design through hands-on guidance and code evaluations in the course at Fall 2023.
- *Knowledge Computing*: Independently designed the Graph Learning module, including syllabus and hands-on labs, for the graduate course in Spring 2024.

HONORS AND AWARDS

National Scholarship (Top 1%)	2025
Outstanding Graduate Scholarship (Top 20%)	2025
First-Class Graduate Scholarship(Top 20%)	2024
Deloitte Digital Elite Challenge Runner-up(Top 0.2%)	2024
Graduate Entrance Outstanding Scholarship(Top 20%)	2023
Outstanding graduate award (Top 1%)	2023
1 st Prize, HUAWEI Cup(The only), on National Undergraduate Internet of Things Contest	2022
National Scholarship (Top 1%)	2022
People's Scholarship	2020,2021,2022
Excellent Student Cadre (Top 5%)	2020,2021,2022

LANGUAGES

Mandarin (Native), English (Fluent), Italian (B1)

OTHER PASSIONS

- A science fiction enthusiast fascinated by films and novels; my favorite movie is *Gattaca* and favorite book series is *Foundation*. I hope my research can one day contribute to space exploration.
- Passionate about traveling and exploring diverse cultures and histories — I've visited over 20 countries across four continents and look forward to discovering more of the world.
- An avid skier (especially alpine skiing), I enjoy the thrill of every descent and the challenge of mastering tougher trails through continuous skill improvement.