

# RONGWU XU



## PERSONAL

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## EDUCATION

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Jun 2025	MS IN COMPUTER SCIENCE, <b>Tsinghua University</b>  <i>Advisor: Prof. Wei Xu, Vice Dean</i>
Aug 2022	Graduate Student at IIIS (Directed by Andrew C. Yao, Turing award laureate 2000)
Jun 2022	BENG IN COMPUTER SCIENCE, <b>Tsinghua University</b> 
Sep 2019	Bachelor Student at Department of Computer Science and Technology (DCST)
Aug 2019	BENG IN ELECTRONIC ENGINEERING, <b>Tsinghua University</b> 
Sep 2018	Bachelor Student at Department of Electronic Engineering (EE)
Jun 2018	HIGH SCHOOL DIPLOMA, <b>Beijing No.4 High School</b> 
Sep 2015	High School Student at the Class of Olympiad (Chemistry)

## RESEARCH

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My primary interests lie in the field of **natural language processing (NLP)**. My current exploration focuses on the following aspects of **large language models (LLMs)**:

- *Machine Psychology*: What are the key similarities and differences between AI models and human mind? How to use psychology-inspired (behavioral, neuro) experiments to test and understand LLMs?
- *Human-AI Alignment*: What are the key ingredients to make AI systems be effectively aligned with human values, behavioral patterns and expectations beyond machine learning algorithms?
- *AI Safety and Ethics*: What are the primary safety and ethical concerns associated with the deployment and application of LLMs, and how can these be addressed to ensure responsible and trustworthy use?

Beyond these, I am interested in evaluation and application of LLMs.

## PUBLICATIONS AND MANUSCRIPTS

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To date, I have authored **22** research papers, including **12** first/co-first author pieces. Most of my works are accepted to top NLP conferences including ACL/EMNLP. I received an ACL 2024 **Outstanding Paper Award** as the first author.

See [Google Scholar](#) for a complete list and bibliometric.

1. "Nuclear Deployed!": Analyzing Catastrophic Risks in Decision-making of Autonomous LLM Agents  
**Rongwu Xu\***, Xiaojian Li\*, Shuo Chen\*, Wei Xu  
*arXiv Preprint*

2. Harnessing Large Language Models to Decode Public Opinions  
Qingjie Zhang\*, **Rongwu Xu\***, Haoting Qian, Di Wang, Ye Yuxian, Yiming Li, Tianwei Zhang, Wenyu Zhu, Chao Zhang, Hewu Li, Han Qiu  
*Preprint*
3. Detecting LLM-Generated Spam Reviews by Integrating Graph Neural Network and Language Model Embeddings  
Xin Liu, **Rongwu Xu**, Xinyi Jia, Jason Liao, Jiao Sun, Wei Xu  
*Preprint*
4. Does Chain-of-Thought Reasoning Really Reduce Harmfulness from Jailbreaking?  
Chengda Lu, Xiaoyu Fan, Yu Huang, **Rongwu Xu**, Jijie Li, Wei Xu  
*Preprint*
5. Rules Created by Symbolic Systems Cannot Constrain a Learning System  
Shih-Wai Lin, **Rongwu Xu**, Xiaojian Li, Wei Xu  
*SSRN Preprint*
6. DEBATEQA: Evaluating Question Answering on Debatable Knowledge  
**Rongwu Xu\***, Xuan Qi\*, Zehan Qi, Wei Xu, Zhijiang Guo  
*arXiv Preprint, major revision at TACL*

————— Below are published papers —————

7. On the Role of Attention Heads in Large Language Model Safety  
Zhenhong Zhou, Haiyang Yu, Xinghua Zhang, **Rongwu Xu**, Fei Huang, Kun Wang, Yang Liu, Junfeng Fang, Yongbin Li  
In Proceedings of *The Thirteenth International Conference on Learning Representations (ICLR, Oral)*, 2025
8. Course-Correction: Safety Alignment Using Synthetic Preferences  
**Rongwu Xu\***, Yishuo Cai\*, Zhenhong Zhou, Renjie Gu, Haiqin Wang, Yan Liu, Tianwei Zhang, Wei Xu, Han Qiu  
In Proceedings of *The 2024 Conference on Empirical Methods in Natural Language Processing: Industry Track (EMNLP-Industry)*, 2024
9. MR-BEN: A Comprehensive Meta-Reasoning Benchmark for Large Language Models  
Zhongshen Zeng, Yinhong Liu, Yingjia Wan, Jingyao Li, Pengguang Chen, Jianbo Dai, Yuxuan Yao, **Rongwu Xu**, Zehan Qi, Wanru Zhao, Linling Shen, Jianqiao Lu, Haochen Tan, Yukang Chen, Hao Zhang, Zhan Shi, Bailin Wang, Zhijiang Guo, Jiaya Jia  
In Proceedings of *The Thirty-Eighth Annual Conference on Neural Information Processing Systems (NeurIPS)*, 2024
10. LONG<sup>2</sup>RAG: Evaluating Long-Context & Long-Form Retrieval-Augmented Generation with Key Point Recall  
Zehan Qi\*, **Rongwu Xu\***, Zhijiang Guo, Cunxiang Wang, Hao Zhang, Wei Xu  
In Findings of *The 2024 Conference on Empirical Methods in Natural Language Processing (EMNLP-Findings)*, 2024
11. How Alignment and Jailbreak Work: Explain LLM Safety through Intermediate Hidden States  
Zhenhong Zhou, Haiyang Yu, Xinghua Zhang, **Rongwu Xu**, Fei Huang, Yongbin Li  
In Findings of *The 2024 Conference on Empirical Methods in Natural Language Processing (EMNLP-Findings)*, 2024
12. Sing it, Narrate it: Quality Musical Lyrics Translation  
Zhuorui Ye, Jinhan Li, **Rongwu Xu**  
In Findings of *The 2024 Conference on Empirical Methods in Natural Language Processing (EMNLP-Findings)*, 2024

13. Walking in Others' Shoes: How Perspective-Taking Guides LLMs in Reducing Toxicity and Bias  
**Rongwu Xu**, Zi'an Zhou, Tianwei Zhang, Zehan Qi, Su Yao, Ke Xu, Wei Xu, Han Qiu  
 In Proceedings of *The 2024 Conference on Empirical Methods in Natural Language Processing (EMNLP-Main)*, 2024
  14. Knowledge Conflicts for LLMs: A Survey  
**Rongwu Xu\***, Zehan Qi\*, Zhijiang Guo, Cunxiang Wang, Hongru Wang, Yue Zhang, Wei Xu  
 In Proceedings of *The 2024 Conference on Empirical Methods in Natural Language Processing (EMNLP-Main)*, 2024
  15. The Earth is Flat because...: Investigating LLMs' Belief towards Misinformation via Persuasive Conversation  
**Rongwu Xu**, Brian S. Lin, Shujian Yang, Tianqi Zhang, Weiyan Shi, Tianwei Zhang, Zhixuan Fang, Wei Xu, Han Qiu  
 In Proceedings of *The 62nd Annual Meeting of the Association for Computational Linguistics (ACL-Main, Oral)*, 2024  
**Outstanding Paper Award**
  16. Preemptive Answer "Attacks" on Chain-of-Thought Reasoning  
**Rongwu Xu\***, Zehan Qi\*, Wei Xu  
 In Findings of *The 62nd Annual Meeting of the Association for Computational Linguistics (ACL-Findings)*, 2024
  17. Exploring Chinese Humor Generation: A Study on Two-part Allegorical Sayings  
**Rongwu Xu**  
 In Proceedings of *International Joint Conference on Neural Networks (IJCNN)*, 2024
  18. Tempo: Confidentiality Preservation in Cloud-based Neural Network Training  
**Rongwu Xu** and Zhixuan Fang  
 In Proceedings of *International Joint Conference on Neural Networks (IJCNN)*, 2024
  19. LSync: A Universal Timeline-synchronizing Solution for Live Streaming  
 Yifan Xu\*, Fan Dang\*, **Rongwu Xu**, Xinlei Chen, Yunhao Liu  
 In *IEEE/ACM Transactions on Networking (ToN)*, 2024
  20. MISO: Legacy-compatible Privacy-preserving Single Sign-on using Trusted Execution Environments  
**Rongwu Xu**, Sen Yang, Fan Zhang, Zhixuan Fang  
 In Proceedings of *IEEE European Symposium on Security and Privacy (EuroS&P)*, 2023
  21. LSync: A Universal Event-synchronizing Solution for Live Streaming  
 Yifan Xu, Fan Dang, **Rongwu Xu**, Xinlei Chen, Yunhao Liu  
 In Proceedings of *IEEE Conference on Computer Communications (INFOCOM)*, 2022
  22. LifeRec: A Mobile App for Lifelog Recording and Ubiquitous Recommendation  
 Jiayu Li, Hantian Zhang\*, Zhiyu He\*, **Rongwu Xu\***, Pingfei Wu\*, Min Zhang, Yiqun Liu, Shaoping Ma  
 In Proceedings of *ACM SIGIR Conference on Human Information Interaction and Retrieval (CHIIR)*, 2022
- (\* equal contribution)

## HONORS AND AWARDS (SELECTED)

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2024	Most Recognized Research Outcomes at Tsinghua University Nomination (Top-2 in IIIS)
2024	Tsinghua University Excellent Teaching Assistant (Top 2%, <200 out of 10000+)
2024	<b>National Scholarship</b> (Top 1%, by Ministry of Education of China)
2024	Tsinghua University Outstanding Student Cadre (Top 1.5%, 121 out of 9000+)
2024	<b>ACL 2024 Outstanding Paper Award</b> (Top 0.79%, 35 out of 4407)
2024	IJCNN 2024 Travel Grants
2023	Tsinghua-Yangtze River Delta International R&D Community Talent Scholarship
2023	Tsinghua University Overall Excellence Scholarship (Top 10%)
2022	Tsinghua University Overall Excellence Scholarship (Top 10%)
2020	Tsinghua University Technological Innovation Excellence Scholarship
2020	1 <sup>st</sup> in “Youth in Action” Social Practice at Tsinghua University
2019	Tsinghua-Panasonic Scholarship (Top 10%)
2018	Outstanding Volunteers in Beijing
2017	2 <sup>nd</sup> Prize (Preliminary) in Chinese Chemistry Olympiad (CChO)
2017	1 <sup>st</sup> Prize in Chinese Chemistry Olympiad (Beijing Regional Qualifiers)

## TALKS AND PRESENTATIONS

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Sep 2024	The Choice of Research	<a href="#">Speech as a student representative at the 2024 IIIS opening ceremony</a>
Aug 2024	Investigating LLMs’ beliefs and behaviors under misinformation	Oral report@ACL conference
Jul 2024	Knowledge conflicts for (RAG) LLMs	<a href="#">Online talk@NICE</a> (w. Soochow University)
Apr 2024	Investigating LLMs’ beliefs and behaviors under misinformation	<a href="#">Propaganda film@IIIS</a> , Tsinghua
May 2023	Privacy-preserving authentication	Oral report@EuroS&P conference

## EXPERIENCES

### Mentoring

I have supervised a total of 7 undergraduate/graduate students, many of whom have co-published articles under my mentorship.

Mar 2024 - Present	Xuan Qi	Undergrad, IIIS@Tsinghua Univ.
Apr 2024 - Oct 2024	Yishuo Cai	Undergrad, SE@Central South Univ. → PhD student, CS@Peking Univ.
Dec 2023 - May 2024	Zi’an Zhou	Undergrad, Zhili College@Tsinghua Univ.
Jun 2023 - Apr 2024	Tianqi Zhang	Undergrad, CS@Tsinghua Univ. → Master’s student, CS@Tsinghua Univ.
Jun 2023 - Apr 2024	Brian S. Lin	Undergrad, CS@Tsinghua Univ. → Master’s student, CS@Tsinghua Univ.
Sep 2023 - Feb 2024	Shujian Yang	Master’s student, SPEIT@Shanghai Jiao Tong Univ.
Oct 2021 - Jul 2022	Xingyu Dang	Undergrad, IIIS@Tsinghua Univ.

### Teaching

I was invited to share my teaching experience within my department (2024 & 2023) and awarded as excellent teaching assistant at Tsinghua University (2024).

- Spring 2024 **Head Teaching Assistant & Organizer**, Tsinghua University  
*Course: Introduction of Large Language Model Applications*  
 Directed and Co-designed labs by mobilizing 10 graduate students, organized the curriculum and assisted labs in class.
- Fall 2023 **Teaching Assistant**, Tsinghua University  
*Course: Operating System and Distributed System*  
 Held discussion and office hours, graded exams, assignments and projects.
- Spring 2022 **Teaching Assistant**, Tsinghua University  
*Course: Distributed System and Blockchain*  
 Held discussion and office hours, graded exams, assignments and projects.

## Exchanging

- Apr 2021 - Oct 2022 **Research Assistant** (Remote), Duke University  
*Granted summer overseas internship (undergrad) by Tsinghua*  
 Conducted research in privacy-preserving authentication. The research findings were published in the EuroS&P conference.  
*Host: Prof. Fan Zhang*

## Internship

- Sep 2024 - Present **Research Intern**, Shanghai Qi Zhi Institute, Shanghai, China  
*Topic: Clinical Large Multimodal (Language) Models*  
 Conducted research in AI for healthcare. Developed multimodal large language models tailored for clinical chatbots.  
*Mentor: Prof. Wei Xu*
- May 2024 - Aug 2024 **Research Intern**, TongYi Vision Intelligence Lab, Alibaba Inc., Beijing, China  
*Topic: Generative Multimodal Models*  
 Conducted research in vision language tasks and world model.  
*Mentor: Yu Liu*
- Dec 2022 - Jan 2023 **Research Intern**, Shanghai Qi Zhi Institute, Shanghai, China  
*Topic: Decentralized Finance*  
 Conducted research in MEV arbitrage forecasting algorithms using graph neural networks (GNNs).  
*Mentor: Prof. Zhixuan Fang*

## PROFESSIONAL SERVICES AND MEMBERSHIPS

### Services

- 2024 - Present **Reviewer**, ACL Rolling Review  
*Tracks: Ethics, Bias, and Fairness, Human-Centered NLP (2025 -), NLP Applications, Resources and Evaluation*

### Memberships

- Jul 2024 - Present **Member**, Association for Computational Linguistics
- Mar 2024 - Present **Member**, International Neural Network Society (INNS)
- Mar 2024 - Present **Member**, Institute of Electrical and Electronics Engineers (IEEE)
- Mar 2024 - Present **Member**, ACL SIGSEC, Association for Computational Linguistics

## SOCIETAL LEADERSHIPS

I have held positions in various student organizations at Tsinghua University and IIIS, and have accumulated rich student work experience.

Jun 2024 - Present	<b>President</b> , IIIS Graduate Students Union, Tsinghua University In charge of organization and publicity.
May 2024 - Present	<b>Freshman Counselor</b> (Class 2024 (graduate)), IIIS, Tsinghua University Responsible for the communication of new students and the collective formation of class.
Apr 2024 - Jul 2024	<b>Captain</b> , summer social practice (graduate, Shenzhen-Hong Kong line), IIIS, Tsinghua University Responsible for organization, mobilization, liaison (government) and advocacy. <i>Award</i> : Excellent Individual of IIIS summer social practice.
Jun 2023 - Jun 2024	<b>Member</b> , IIIS Graduate Students Union, Tsinghua University Participated in the organization of the first student festival and other social activities. <i>Award</i> : Excellent Individual of IIIS Graduate Students Union (2023-2024).

## SKILLS AND EXPERTISE

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- **Research**: Experienced in deep learning/data analysis, also ability with computer systems/applied cryptography/software engineering.
- **Programming Language**: Proficient in C++/Go/Python/Java/JavaScript/L<sup>A</sup>T<sub>E</sub>X, also ability with Verilog/System Verilog/ASM/Rust/P4/HTML/Matlab.
- **Technological**: Proficient in Pytorch/NumPy/Matplotlib/Git/Linux OS/Markdown, also ability with Docker/Wireshark/Microsoft Office.
- **Other Expertise**: Good communication skills, love collaborating with people, experienced in mentoring students, works well in a team.
- **Standard Language Test (TOEFL)**: 106 (May 2021).