

Ruiyi Yang

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Education

- Ph.D.** **University of New South Wales**, Sydney, Australia Apr. 2024 – Nov. 2027
Computer Science
Supervisors: Prof. Flora Salim, A/Prof. Hao Xue, A/Prof. Imran Razzak
- M.S.** **University of New South Wales**, Sydney, Australia Sep. 2022 – Dec. 2023
Data Science and Decisions
- B.Eng.** **Beihang University**, Beijing, China Sep. 2017 – June. 2022
Software Engineering

Work Experience

- University of New South Wales**, Research Officer Sydney, Australia
Jul. 2025 – Present
Advisors: Prof. Salil Kanhere, Dr. Rahat Masood, Prof. Flora Salim
- Worked in the project *GuardianAgent: A Trustworthy Personal Agentic AI Platform*, focusing on privacy-preserving multi-agent system design.
 - Designed the privacy protection framework, including agent coordination, user data handling, and trustworthy interaction mechanisms.
 - Coordinated user study design, system revision, and manuscript preparation; one first-author paper was accepted to Findings of EMNLP 2026 and another is under submission.
- University of New South Wales**, Casual Academic Sydney, Australia
Jul. 2024 – Present
- Taught tutorials for multiple undergraduate and postgraduate computer science and data science courses.
 - Mentored honours and master's students, co-supervising "Taste of Research" projects with Prof. Flora Salim.
- Cresstec Pty Ltd**, Software Engineer Intern Sydney, Australia
Dec. 2023 – Present
- Developed and maintained software modules for HDAC temperature control systems.
 - Built and improved React-based dashboards and data visualisation components for energy monitoring, scheduling, and operational analytics for both internal and customer usage.
- Jina AI**, Software Engineer Intern Beijing, China
Sept. 2021 – June. 2022
- Maintained and fixed executors compatible with the core Jina framework.
 - Developed a cross-modal search example supporting both image and text indexing, enabling users to search images with text queries or retrieve descriptions from uploaded images.
 - Contributed to DocsQA, a question-answering system built on company product documentation.
 - Participated in the CLIP-as-Service project, integrating models into the framework to support bilingual retrieval and query understanding.

Publications

- **Ruiyi Yang**, Hao Xue, Imran Razzak, Shirui Pan, Hakim Hacid, Flora D. Salim. *Divide by Question, Conquer by Agent: SPLIT-RAG with Question-Driven Graph Partitioning*. EMNLP 2026 (Main Conference).

- **Ruiyi Yang**, Gayathri Lihinikaduarachchi, Rahat Masood, Flora D. Salim, Salil S. Kanhere. *GuardianAgent: Policy-Conditioned Risk-Adaptive Anonymization with Verified Adversarial Escalation*. Findings of EMNLP 2026.
- **Ruiyi Yang**, Hao Xue, Imran Razzak, Hakim Hacid, Flora D. Salim. *RELOOP: Recursive Retrieval with Multi-Hop Reasoner and Planners for Heterogeneous QA*. Findings of EMNLP 2026.
- **Ruiyi Yang**, Hao Xue, Imran Razzak, Flora D. Salim. *Beyond Single Pass, Looping Through Time: KG-IRAG with Iterative Knowledge Retrieval*. Proceedings of the ACM Web Conference (WWW), 2026. Oral Presentation.
- **Ruiyi Yang**, Lihuan Li, Hao Xue, Flora D. Salim. *STAR: Failure-Aware Markovian Routing for Multi-Agent Spatiotemporal Reasoning*. Preprint, 2026.
- **Ruiyi Yang**, Zechen Li, Hao Xue, Imran Razzak, Flora D. Salim. *MAGE: Multi-Agent Self-Evolution with Co-Evolutionary Knowledge Graphs*. Preprint, 2026.
- Lihuan Li, Wilson Wongso, Baiyu Chen, Hao Xue, **Ruiyi Yang**, Yifan Duan, Xiachong Lin, Yang Song, Flora Salim. *TrajPrism: A Multi-Task Benchmark for Language-Grounded Urban Trajectory Understanding*. Preprint, 2026.
- **Ruiyi Yang**, Flora D. Salim, Hao Xue. *SSTKG: Simple Spatio-Temporal Knowledge Graph for Interpretable and Versatile Dynamic Information Embedding*. Proceedings of the ACM Web Conference (WWW), 2024. Oral Presentation.

Honors & Awards

- ACM Web Conference 2026 Oral Presentation 2026
- UNSW Higher Degree by Research Scholarship 2024 – Present
- ACM Web Conference 2024 Oral Presentation 2024
- Master Degree with Excellence, University of New South Wales 2023

Skills

Languages: Chinese(native); English(proficient); French(1.5 year full time learning experience); Japanese(JLPT-N2)

Programming: Python, C#, JavaScript, Java, SQL, Bash, HTML/CSS

AI & Machine Learning: LLM, RAG, Multi-Agent Systems, Self-Evolving Agents, Knowledge Graphs, Time-Series Analysis

Software Development: React.js, Flask, Vue.js, Backend-Frontend Integration

Data & Databases: PostgreSQL, MySQL, Neo4j, Cypher, Pandas, NumPy