Jiawei Xu

Ph.D. Student in Information Studies

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EDUCATION

Ph.D. Student in Information Studies   Aug. 2023–Present
The University of Texas at Austin
Focus: Language Model Agents, AI for Health, Science of Science

M.S. in Information Science   Sep. 2021–Jul. 2023
Peking University
Award: Excellent Graduate of Beijing

B.Sc. in Information Management & Systems   Sep. 2017–Jul. 2021
Peking University

PUBLICATIONS

Journal Articles

1. **Xu, J.**, Zheng, Z., Min, C., Huang, W., & Bu, Y*. (2025). Knowledge Integration and Diffusion Structures of Interdisciplinary Research: A Large-Scale Analysis Based on Propensity Score Matching. *Journal of the Association for Information Science and Technology (JASIST)*. [Code] [PDF]

2. Xu, J., Yu, C., **Xu, J.**, Torvik, V. I., Kang, J., Sung, M., Song, M., Bu, Y., & Ding, Y*. (2025). PubMed Knowledge Graph 2.0: Connecting Papers, Patents, and Clinical Trials in Biomedical Science. *Scientific Data*.

Conference Papers

3. Lu, M., Wu, M., **Xu, J.**, Li, W., Liu, F., Ding, Y., Sun, Y., Lu, J., & Zhang, Y. (2026). From Newborn to Impact: Bias-Aware Citation Prediction. *The Web Conference 2026*. [arXiv]

4. **Xu, J.**, Chen, J., Ye, Y., Sembay, Z., Thaker, S., Payne-Foster, P., Chen, J., & Ding, Y*. (2025). Interactive Graph Visualization and Teaming Recommendation in an Interdisciplinary Project's Talent Knowledge Graph. *ASIS&T 2025 (88th Annual Meeting of the Association for Information Science and Technology)*. [Demo] *(Acceptance rate: 28%)*

5. **Xu, J.**, Xie, Q., Liu, M., Sembay, Z., Thaker, S., Payne-Foster, P., Chen, J. Y., & Ding, Y*. (2024). Decoding Patterns of Data Generation Teams for Clinical and Scientific Success: Insights from the Bridge2AI Talent Knowledge Graph. In *Proceedings of the ACM/IEEE Joint Conference on Digital Libraries (JCDL)*. *(Acceptance rate: 30%)*

6. Pandit, S., **Xu, J.**, Hong, J., Wang, Z., Chen, T., Xu, K., & Ding, Y*. (2025). MedHallu: A Comprehensive Benchmark for Detecting Medical Hallucinations in Large Language Models. *EMNLP 2025 Main Conference (Empirical Methods in Natural Language Processing)*. [Link] *(Acceptance rate: 22%)*

7. Cox, K., **Xu, J.**, Han, Y., Xu, R., Chen, T., Gerych, W., & Ding, Y*. (2025). Mapping from Meaning: Addressing the Miscalibration of Prompt-Sensitive Language Models. In *Proceedings of the AAAI Conference on Artificial Intelligence (AAAI)*. [Code] [Link] *(Acceptance rate: 23%)*

8. Cox, K.*, Qu, G.*, Hsu, C.-Y., **Xu, J.**, Zhou, Y., Tan, Z., Hu, M., Chen, T., Hu, Z., Zhao, Z.†, & Ding, Y.† (2025). Thought Graph: Balancing specificity and uncertainty in LLM-based gene set annotation. *Proceedings of IEEE ICHI 2025 (International Conference on Healthcare Informatics)*.

9. Naeem, A., Li, T., Liao, H.-R., **Xu, J.**, Mathew, A. M., Zhu, Z., Tan, Z., Jaiswal, A. K., Salibian, R. A., Hu, Z., Chen, T., & Ding, Y*. (2024). Path-RAG: Knowledge-Guided Key Region Retrieval for Open-ended Pathology Visual Question Answering. In *Proceedings of the Machine Learning for Health (ML4H)*. [Code] [Link]

10. Hsu, C.-Y., Cox, K., **Xu, J.**, Tan, Z., Zhai, T., Hu, M., Pratt, D., Chen, T., Hu, Z., & Ding, Y*. (2024). Thought Graph: Generating Thought Process for Biological Reasoning. In *Companion Proceedings of the ACM Web Conference 2024 (WWW'24 Companion)*. [Link]

Workshop Papers

11. **Xu, J.** (co-first), Raza, Z. (co-first), Lim, T., Boddy, L., Mery, C., Well, A., & Ding, Y*. (2025). LLM-TA: An LLM-Enhanced Thematic Analysis Pipeline for Transcripts from Parents of Children with Congenital Heart Disease. *GenAI4Health Workshop at AAAI.* [Code] [Link]

12. **Xu, J.**, Ding, Y., & Bu, Y*. (2024). Position: Open and Closed Large Language Models in Healthcare. *GenAI4Health Workshop at NeurIPS 2024.* [Link]

13. **Xu, J.**, Sembay, Z., Thaker, S., Payne-Foster, P., Chen, J. Y., & Ding, Y*. (2024). Demo: Interactive Visualization of Semantic Relationships in a Biomedical Project's Talent Knowledge Graph. *GenAI4Health Workshop at NeurIPS 2024.* [Link] [Interactive Demo Link]

Under Review & Preprints

14. **Xu, J.**, Koesdwiady, A., Bei, S., Han, Y., Huang, B., Wang, D., Chen, Y., Wang, Z., Wang, P., Li, P., & Ding, Y. (2026). Rethinking the Value of Multi-Agent Workflow: A Strong Single Agent Baseline. *Preprint.* [Paper]

15. **Xu, J.**, Lee, Y., Youssef, A. E., Yun, E., Huang, T., Guo, T., Saber, H., Ying, R., & Ding, Y*. (2025). Beyond Feature Importance: Feature Interactions in Predicting Post-Stroke Rigidity with Graph Explainable AI. *arXiv preprint.* [arXiv]

16. Xu, H., Yi, S., Lim, T., **Xu, J.**, Well, A., Mery, C., Zhang, A., Zhang, Y., Ji, H., Pingali, K., Leng, Y., & Ding, Y*. (2025). TAMA: A Human-AI Collaborative Thematic Analysis Framework Using Multi-Agent LLMs for Clinical Interviews. *arXiv preprint.* [arXiv]

EMPLOYMENT

Graduate Research Assistant Aug. 2023–Present
School of Information, The University of Texas at Austin

Applied Scientist Intern May 2025–Nov. 2025
Amazon Search

PROJECTS

MATRIX: Multi-Agent Teaming Recommendation via Interactive Expertise Gap Identification
Prof. Ying Ding & Prof. Jiliang Tang Apr. 2024–Present

- A paper: ***MATRIX: Multi-Agent Teaming Recommendation through Interactive Expertise Gap Identification***
- Developing an LLM Agent-based RAG system for scientific teaming recommendations and question answering. *(Available at:* https://cm4aiteaming.streamlit.app/*)*
- Curating a benchmark dataset for teaming evaluation using large-scale scientific collaboration data

Cell Maps for AI (CM4AI) Data Generation Project
Prof. Ying Ding Aug. 2023–Present

- Built a knowledge graph of CM4AI project contributors.
- Visualized the knowledge graph using Svelte and Pixi.js. *(Available at:* https://cm4aikg.vercel.app/*)*

INVITED TALKS AND TEACHING EXPERIENCE

CM4AI Talent Knowledge Graph
Virtual Talk Oct. 2024; Apr. 2025

Beyond Correlation: What Factors Influence Scientific Performance
Virtual Talk Aug. 2023

Guest Lecture: LLM Prompt Engineering and Multi-Agent Systems
The University of Texas at Austin 2024–2025

Teaching Assistant: Data Visualization
Peking University 2021–2023

Teaching Assistant: Complex Networks
Peking University 2022

SERVICE

Reviewer
Journals

- ACM Computing Surveys
- Data and Information Management
- Journal of the Association for Information Science and Technology
- Nature Humanities & Social Sciences Communications
- Online Information Review
- Data Intelligence
- Information & Culture
- Journal of Clinical and Translational Science
- Scientometrics

Conferences

- AAAI 2026 Main Conference
- AAAI 2026 AI Alignment Track

Workshop Organizer   2025
GenAI4Health Workshop at NeurIPS 2025

Student Volunteer   2024
NeurIPS 2024 GenAI4Health Workshop, Vancouver, Canada

PROFESSIONAL SKILLS

</> Coding	Python (PyTorch, Hugging Face, Streamlit), JavaScript, Node.js, Svelte	
🖌 Design & Visualization	LaTeX, Photoshop, Premiere, PowerPoint	
🅰🈁 Languages	English (Professional), Mandarin (Native)	