

Hanjia Lyu

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Research Areas

AI and Society, Multimodal LLMs, Graph Learning, Computational Social Science, Health Informatics

Education

Ph.D. Candidate in Computer Science, University of Rochester	2021 - Now
M.S. in Data Science, University of Rochester	2019 - 2020
B.A. in Economics, Fudan University	2013 - 2017

Industry Experience

Snap Research Scientist Intern	<i>Remote</i> May 2025–Dec 2025
Meta Research Scientist Intern	<i>Menlo Park, CA</i> Oct 2024–Jan 2025
Research Scientist Intern	Jun–Oct 2024
Research Scientist Intern	Apr–Aug 2023
Research Scientist Intern	May–Sep 2022
Wyze Labs Research Scientist Intern	<i>Remote</i> Jan–May 2022
University of Rochester Medical Center Research Assistant	<i>Rochester, NY</i> Jan–May 2021

Recognition

- ◊ Google PhD Fellowship 2024
- ◊ Graduate Student Supplemental Professional Development Funding Award 2024
- ◊ NSF Student Travel Award, ACM International Conference on Information and Knowledge Management (CIKM) 2024
- ◊ Student Travel Award, IEEE International Conference on Multimedia Information Processing and Retrieval (MIPR) 2024

◊ Student Travel Award, International Conference on Learning Representations (ICLR)	2024
◊ Donald M. and Janet C. Barnard Fellowship	2023
◊ Snap Research Fellowship Semi-Finalist	2022
◊ Graduate Student Scholarship, International Conference on Social Computing, Behavioral-Cultural Modeling & Prediction and Behavior Representation in Modeling and Simulation (SBP-BRiMS)	2021
◊ First place in the UR Biomedical Data Science Hackathon	2020

Selected Publications

[For a complete list of my publications, please visit [my homepage](#).]

1. **Hanjia Lyu**, Jiebo Luo, Jian Kang, and Allison Koenecke. Characterizing bias: Benchmarking large language models in simplified versus traditional Chinese. In *Proceedings of the 2025 ACM Conference on Fairness, Accountability, and Transparency*, FAccT '25, pp. 2815–2846, New York, NY, USA, 2025. Association for Computing Machinery. ISBN 9798400714825. doi: 10.1145/3715275.3732182. URL <https://doi.org/10.1145/3715275.3732182>
 - *Presented at: FAccT 2025, IC2S2 2025 (Parallel Talk)*
2. **Hanjia Lyu***, Jinfa Huang*, Daoan Zhang*, Yongsheng Yu*, Xinyi Mou*, Jinsheng Pan, Zhengyuan Yang, Zhongyu Wei, and Jiebo Luo. GPT-4V(ision) as a social media analysis engine. *ACM Trans. Intell. Syst. Technol.*, 16(3), April 2025. ISSN 2157-6904. doi: 10.1145/3709005. URL <https://doi.org/10.1145/3709005>
 - *Presented at: Synchronous Reading Club*
3. Hanqing Zeng*, **Hanjia Lyu***, Diyi Hu, Yinglong Xia, and Jiebo Luo. Mixture of weak & strong experts on graphs. In *The Twelfth International Conference on Learning Representations, ICLR*, Vienna, Austria, May, 2024. URL <https://openreview.net/pdf?id=wYvuY60SdD>
 - *Presented at: ICLR 2024*
4. **Hanjia Lyu**, Song Jiang, Hanqing Zeng, Yinglong Xia, Qifan Wang, Si Zhang, Ren Chen, Chris Leung, Jiajie Tang, and Jiebo Luo. LLM-Rec: Personalized recommendation via prompting large language models. In Kevin Duh, Helena Gomez, and Steven Bethard (eds.), *Findings of the Association for Computational Linguistics: NAACL 2024*, pp. 583–612, Mexico City, Mexico, June 2024. Association for Computational Linguistics. doi: 10.18653/v1/2024.findings-naacl.39. URL <https://aclanthology.org/2024.findings-naacl.39/>
 - *Presented at: NAACL 2024, DEFFirst Reading Group at Mila x Vector Institute*

5. **Hanjia Lyu***, Jinsheng Pan*, Zichen Wang*, and Jiebo Luo. Computational assessment of hyperpartisanship in news titles. *Proceedings of the International AAAI Conference on Web and Social Media*, 18(1):999–1012, May 2024. doi: 10.1609/icwsm.v18i1.31368. URL <https://ojs.aaai.org/index.php/ICWSM/article/view/31368>
 - Media coverage: *UofR News Center, Study Finds, ScienceBlog, EurekAlert!*
 - Presented at: ICWSM 2024
6. Xinyi Mou, Zejun Li, **Hanjia Lyu**, Jiebo Luo, and Zhongyu Wei. Unifying local and global knowledge: Empowering large language models as political experts with knowledge graphs. In *Proceedings of the ACM Web Conference 2024*, WWW ’24, pp. 2603–2614, New York, NY, USA, 2024. Association for Computing Machinery. ISBN 9798400701719. doi: 10.1145/3589334.3645616. URL <https://doi.org/10.1145/3589334.3645616>
7. **Hanjia Lyu**, Arsal Imtiaz, Yufei Zhao, and Jiebo Luo. Human behavior in the time of COVID-19: Learning from big data. *Frontiers in Big Data*, 6:1099182, 2023. URL <https://doi.org/10.3389/fdata.2023.1099182>
8. **Hanjia Lyu** and Jiebo Luo. Understanding political polarization via jointly modeling users, connections and multimodal contents on heterogeneous graphs. In *Proceedings of the 30th ACM International Conference on Multimedia*, MM ’22, pp. 4072–4082, New York, NY, USA, 2022. Association for Computing Machinery. ISBN 9781450392037. doi: 10.1145/3503161.3547898. URL <https://doi.org/10.1145/3503161.3547898>
 - Presented at: MM 2022, Meta, Western New York Image and Signal Processing Workshop
9. **Hanjia Lyu**, Junda Wang, Wei Wu, Viet Duong, Xiyang Zhang, Timothy D. Dye, and Jiebo Luo. Social media study of public opinions on potential COVID-19 vaccines: informing dissent, disparities, and dissemination. *Intelligent Medicine*, 2(1):1–12, 2022. ISSN 2667-1026. doi: <https://doi.org/10.1016/j.imed.2021.08.001>. URL <https://www.sciencedirect.com/science/article/pii/S266710262100036X>
 - Media coverage: *News Medical*
 - Presented at: Great Lakes Science Boot Camp for Librarians, CSUG Research Panel
10. **Hanjia Lyu**, Zihe Zheng, and Jiebo Luo. Misinformation versus facts: Understanding the influence of news regarding COVID-19 vaccines on vaccine uptake. *Health Data Science*, 2022. URL <https://doi.org/10.34133/2022/9858292>
 - Media coverage: *Medical Economics, News Medical, News Wise, Medical Xpress*
 - Presented at: Great Lakes Science Boot Camp for Librarians, CSUG Research Panel

11. **Hanjia Lyu**, Yangxin Fan, Ziyu Xiong, Mayya Komisarchik, and Jiebo Luo. Understanding public opinion toward the #StopAsianHate movement and the relation with racially motivated hate crimes in the US. *IEEE Transactions on Computational Social Systems*, 2021. URL <https://doi.org/10.1109/TCSS.2021.3136858>
 - Media coverage: UofR News Center, Rochester Beacon, Futurity
12. **Hanjia Lyu**, Long Chen, Yu Wang, and Jiebo Luo. Sense and sensibility: Characterizing social media users regarding the use of controversial terms for COVID-19. *IEEE Transactions on Big Data*, 7(6):952–960, 2020. URL <https://doi.org/10.1109%2FTBDATA.2020.2996401>
 - Media coverage: IEEE Spectrum, Tech Xplore, UofR News Center
 - Presented at: Experience Rochester, CSUG Research Panel

Teaching Experience

Guest Lecturer

University of Rochester	Nov 2024
CSC 511: Large Language Models	
University of Rochester	Sep 2023
CSC 440: Data Mining	

Teaching Assistant

University of Rochester	
CSC 480: Computer Models & Limitations	Spring 2023
CSC 486: Computational Complexity	Spring 2023
CSC 440: Data Mining	Fall 2022
CSC 446: Machine Learning	Spring 2022
CSC 440: Data Mining	Fall 2021
CSC 440: Data Mining	Fall 2020

Talks & Publicity

- ◊ Presentation at the ACM Conference on Fairness, Accountability, and Transparency (FAccT) Jun 2025
- ◊ Invited talk at Meta Jun 2025

◊ Presentation at the ACM International Conference on Information and Knowledge Management (CIKM)	Oct 2024
◊ Presentation at the IEEE International Conference on Multimedia Information Processing and Retrieval (MIPR)	Aug 2024
◊ Presentation at the International AAAI Conference on Web and Social Media (ICWSM)	Jun 2024
◊ Presentation at the Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL)	Jun 2024
◊ Presentation at the International Conference on Learning Representations (ICLR)	May 2024
◊ Invited talk at Data Science Snack Series: Internship Panel, University of Rochester	Feb 2024
◊ Invited talk at Synchronous Reading Club	Jan 2024
◊ Invited talk at Fudan University	Nov 2023
◊ Invited talk at DEFFirst Reading Group at Mila x Vector Institute	Oct 2023
◊ Presentation at the IEEE International Conference on Digital Health (ICDH)	Jul 2023
◊ Presentation at the AS&E Graduate Research Symposium, University of Rochester	Mar 2023
◊ Invited talk at the Western New York Image and Signal Processing Workshop	Nov 2022
◊ Invited talk at the Great Lakes Science Boot Camp for Librarians	Jun 2022
◊ Invited talk at Fudan-UC Center on Contemporary China, UCSD	May 2022
◊ Invited talk at InsurTech Innovation: UK & China as Hotspots of the Global World	Apr 2022
◊ Invited talk at CSUG Research Panel, University of Rochester	Oct 2021
◊ Presentation at the International Conference on Social Computing, Behavioral-Cultural Modeling & Prediction and Behavior Representation in Modeling and Simulation (SBP-BRiMS)	Jul 2021
◊ Invited talk at Experience Rochester, University of Rochester	Sep 2020

Service to the Research Community

Organizing Committee

◊ 1 st Multimodal Learning for Social Good (MML4SG) workshop at the IEEE International Conference on Multimedia and Expo (ICME)	2024
◊ 1 st Visual-Language Alignment in Text-Guided Multi-Modal Generation (TMMG) workshop at the IEEE International Conference on Multimedia and Expo (ICME)	2024

Area Chair

- ◊ Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL) 2025
- ◊ Conference on Empirical Methods in Natural Language Processing (EMNLP) 2024

Guest Editor for Journals

- ◊ Frontiers in Public Health
- ◊ ACM Transactions on Multimedia Computing, Communications, and Applications
 - Special Issue on Multimodal Video Understanding and Analysis with Foundation Models

Program Committee/Reviewer for Conferences

- ◊ AAAI Conference on Artificial Intelligence (AAAI) 2023–2025
- ◊ Annual Meeting of the Association for Computational Linguistics (ACL) 2024–2025
- ◊ Asian Conference on Machine Learning (ACML) 2024
- ◊ ACM International Conference on Multimedia (ACM MM) 2023–2025
- ◊ International Conference on Artificial Intelligence and Statistics (AISTATS) 2025
- ◊ IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM) 2023–2024
- ◊ IEEE International Conference on Big Data (BigData) 2024
- ◊ ACM CHI Conference on Human Factors in Computing Systems (CHI) 2026
- ◊ ACM International Conference on Information and Knowledge Management (CIKM) 2022–2024
- ◊ IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) 2025
- ◊ Conference on Empirical Methods in Natural Language Processing (EMNLP) 2023, 2025
- ◊ IEEE International Conference on Data Mining (ICDM) 2021, 2023
- ◊ International Conference on Learning Representations (ICLR) 2025–2026
- ◊ International Conference of the Learning Sciences (ICLS) 2022
- ◊ IEEE International Conference on Multimedia and Expo (ICME) 2024–2025

◊ International Conference on Machine Learning (ICML)	2025
◊ International Conference on Pattern Recognition (ICPR)	2024
◊ International AAAI Conference on Web and Social Media (ICWSM)	2021–2025
◊ International Joint Conference on Natural Language Processing – Asia-Pacific Chapter of the Association for Computational Linguistics (IJCNLP-AACL)	2023
◊ ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD)	2023–2025
◊ Conference on Neural Information Processing Systems (NeurIPS)	2024–2025
◊ NeurIPS Datasets and Benchmarks Track	2023–2024
◊ ACM Recommender Systems Conference (RecSys)	2025
◊ SIAM International Conference on Data Mining (SDM)	2024
◊ ACM International Conference on Web Search and Data Mining (WSDM)	2024–2025
◊ The Web Conference (WWW)	2022

Reviewer for Journals

- ◊ Machine Learning/Artificial Intelligence
 - ACM Transactions on Information Systems
 - ACM Transactions on Interactive Intelligent Systems
 - Expert Systems With Applications
 - IEEE Transactions on Knowledge and Data Engineering (TKDE)
 - IEEE Transactions on Multimedia (TMM)
 - IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)
 - Knowledge-Based Systems
- ◊ Data Science/Computational Social Science
 - IEEE Transactions on Computational Social Systems
 - Journal of Big Data
 - Journal of Computational Social Science
 - Social Network Analysis and Mining
 - Telematics and Informatics
- ◊ Multidisciplinary
 - PLOS ONE
 - SAGE Open
 - Scientific Reports