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 *Advisor: Prof. Jiebo Luo*	2021 - Now
M.S. in Data Science, University of Rochester	2019 - 2020
B.A. in Economics, Fudan University	2013 - 2017

Employment

Snap — *Remote*
Research Scientist Intern — May 2025–Dec 2025

Meta — *Menlo Park, CA*
Research Scientist Intern — Jun 2024–Jan 2025
Research Scientist Intern — Apr–Aug 2023
Research Scientist Intern — May–Sep 2022

Wyze Labs — *Remote*
Research Scientist Intern — Jan–May 2022

University of Rochester Medical Center — *Rochester, NY*
Research Assistant — 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

$\diamond$ Student Travel Award, International Conference on Learning Representations (ICLR) — 2024

$\diamond$ **Donald M. and Janet C. Barnard Fellowship** — 2023

$\diamond$ **Snap Research Fellowship Semi-Finalist** — 2022

$\diamond$ Graduate Student Scholarship, International Conference on Social Computing, Behavioral-Cultural Modeling & Prediction and Behavior Representation in Modeling and Simulation (SBP-BRiMS) — 2021

$\diamond$ First place in the UR Biomedical Data Science Hackathon — 2020

Service to the Research Community

Area Chair

$\diamond$ Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL) — 2025

$\diamond$ Conference on Empirical Methods in Natural Language Processing (EMNLP) — 2024

Senior Program Committee

$\diamond$ International AAAI Conference on Web and Social Media (ICWSM) — 2026

Guest Editor for Journals

$\diamond$ Frontiers in Public Health

$\diamond$ ACM Transactions on Multimedia Computing, Communications, and Applications

　　− Special Issue on Multimodal Video Understanding and Analysis with Foundation Models

Organizing Committee

$\diamond$ 1st Multimodal Learning for Social Good (MML4SG) workshop at the IEEE International Conference on Multimedia and Expo (ICME) — 2024

$\diamond$ 1st Visual-Language Alignment in Text-Guided Multi-Modal Generation (TMMG) workshop at the IEEE International Conference on Multimedia and Expo (ICME) — 2024

Selected Publications

[For a complete list of my publications, please visit <u>my homepage</u>.]

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`

   → *<u>Presented at</u>: 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`

   → *<u>Presented at</u>: 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`

   → *<u>Presented at</u>: 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/`

   → *<u>Presented at</u>: NAACL 2024, DEFirst 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`

   → *<u>Media coverage</u>: UofR News Center, Study Finds, ScienceBlog, EurekAlert!*

   → *<u>Presented at</u>: 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 International Conference on Web Search and Data Mining (WSDM)	Feb 2026
◇ 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 DEFirst 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 Meta — Aug 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