

David Mingfei Liu

Contact Information

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Education

Northeastern University (2020 - 2025 *Expected*)
Ph.D. Candidate, Computer Science
Khoury College of Computer Sciences and Network Science Institute
Advisor: Professor Tina Eliassi-Rad

Princeton University (2018)
B.S.E in Computer Science with Certificate in Statistics and Machine Learning
summa cum laude
Undergraduate Advisor: Professor Matthew J. Salganik

Publications

David Liu, Virginie Do, Nicolas Usunier, Maximilian Nickel. 2023. Group Fairness Without Demographics Using Social Networks. In *2023 ACM Conference on Fairness, Accountability, and Transparency (FAccT '23)*. [\[pdf\]](#)

David Liu and Tina Eliassi-Rad. 2023. Identifying and Mitigating Instability in Embeddings of the Degenerate Core. In *Proceedings of the 2023 SIAM Data Mining Conference (SDM)*. [\[pdf\]](#)

Agapi Rissaki*, Bruno Scarone*, **David Liu**, Aditeya Pandey, Brennan Klein, Tina Eliassi-Rad, and Michelle A. Borkin. 2022. BiaScope: Visual Unfairness Diagnosis for Graph Embeddings. *Symposium on Visualization in Data Science at IEEE VIS (VDS '22)*. [\[pdf\]](#)

David Liu*, Priyanka Nanayakkara*, Sarah Sakha, Grace Abuhamad, Su Lin Blodgett, Nicholas Diakopoulos, Jessica Hullman, and Tina Eliassi-Rad. 2022. Examining Responsibility and Deliberation in AI Impact Statements and Ethics Reviews. In *Proceedings of the 2022 AAAI/ACM Conference on AI, Ethics, and Society (AIES '22)*. [\[pdf\]](#)

David Liu, Zohair Shafi, William Fleisher, Tina Eliassi-Rad, and Scott Alfeld. 2021. RAWLSNET: Altering Bayesian Networks to Encode Rawlsian Fair Equality of Opportunity. In *Proceedings of the 2021 AAAI/ACM Conference on AI, Ethics, and Society (AIES '21)*. [\[pdf\]](#)

David Liu and Matthew J. Salganik. Successes and struggles with computational reproducibility: Lessons from the fragile families challenge. *Socius*, 5:1–21, 2019. [\[pdf\]](#)

Preprints

David Liu, Jackie Baek, and Tina Eliassi-Rad. 2023. When Collaborative Filtering is not Collaborative: Unfairness of PCA for Recommendations. [\[pdf\]](#)

Public Scholarship	Cynthia Conti-Cook, Roya Pakzad, Sarah Ariyan Sakha, and David Liu . 2023. A Guiding Framework for Vetting Technology Vendors Operating in the Public Sector. A research report by the Ford Foundation. [link] .	
	David Liu and Sarah Sakha. Power: The exclusionary costs of large-scale computing. In <i>A New AI Lexicon</i> by The AI Now Institute. [link]	
Tutorials	2023 ACM Conference on Fairness, Accountability, and Transparency (FAccT '23): Translation/Dialogue Tutorial: A Guiding Framework for Vetting Technology Vendors Operating in the Public Sector (with Cynthia Conti-Cook, Roya Pakzad, and Sarah Ariyan Sakha), Chicago, IL, June 2023.	
Posters	David Liu . Disaggregating bike-share mobility data to measure urban segregation over time. <i>The 9th International Conference on Computational Social Science (IC2S2)</i> , Copenhagen, Denmark, July 2023.	
	David Liu and Tina Eliassi-Rad. Increasing the Stability of Embeddings of the Degenerate Core. <i>The 2022 International Conference on Network Science (NetSci)</i> , Virtual Conference, July 2022. (oral presentation)	
	David Liu . Uncovering the Evolution of Mukbang Videos on Youtube. <i>The 7th International Conference on Computational Social Science (IC2S2)</i> , Virtual Conference, July 2021.	
	David Liu . Uncovering the Evolution of Mukbang Videos on Youtube. <i>Networks 2021: A Joint Sunbelt and NetSci Conference</i> , Virtual Conference, July 2021. (poster presentation)	
Professional Experience	Meta - <i>Research Scientist Intern</i>	May 2024 - Aug 2024
	Graph Science and Statistics Research Team	
	University of California, Berkeley - <i>Visiting Graduate Student</i>	Fall 2022
	Simons Institute Program on “Graph Limits and Processes on Networks: From Epidemics to Misinformation”	
	Meta AI (FAIR) - <i>AI Research Intern</i>	May 2022 - Aug 2022
	Supervisor: Maximilian Nickel	
	Taraaz - <i>Researcher</i>	Feb 2022 - Aug 2022, Oct 2023 - Dec 2023
	Bloomberg LP - <i>Software Engineer</i>	Jul 2018 - Sep 2020
	The New York Times - <i>Software Intern</i>	Jun 2017 - Aug 2017
Awards and Honors	2023	SDM Doctoral Forum and Travel Award
	2021	NSF Graduate Research Fellowship (GRFP)
	2018	Sigma Xi Nomination
Activities	2021	Subtle CSCW Traits: Tensions around Identity Formation and Online Activism in the Asian Diaspora, workshop participant.
	2020	ML Reproducibility Challenge, participant.

Invited Talks	2024	MSR New England ML Ideas Seminar, Invited Speaker. Cambridge, MA.
	2021	MD4SG Working Group on Discrimination in Algorithmic Decision-making, Invited Speaker. Online.
	2019	RabbitMQ Summit, Keynote Speaker. <i>Growing a farm of rabbits to scale financial applications</i> . London, UK.
	2016	Fragile Families Challenge Scientific Workshop, Invited Speaker. Princeton, NJ.
Academic Service	ICLR '23	Program Committee
	AIES '21, '22, '23	Program Committee
	FAccT '23, '24	Program Committee
	The Web '24	Program Committee
	NeurIPS '21	Student Volunteer