

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	<p>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].</p> <p>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]</p>	
Tutorials	<p>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.</p>	
Posters	<p>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.</p> <p>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)</p> <p>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.</p> <p>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)</p>	
Professional Experience	<p>University of California, Berkeley - <i>Visiting Graduate Student</i> Fall 2022</p> <p>Simons Institute Program on “Graph Limits and Processes on Networks: From Epidemics to Misinformation”</p> <p>Meta AI (FAIR) - <i>AI Research Intern</i> May 2022 - Aug 2022</p> <p>Supervisor: Maximilian Nickel</p> <p>Taraaz - <i>Researcher</i> Feb 2022 - Aug 2022</p> <p>Bloomberg LP - <i>Software Engineer</i> Jul 2018 - Sep 2020</p> <p>The New York Times - <i>Software Intern</i> Jun 2017 - Aug 2017</p>	
Awards and Honors	<p>2023 SDM Doctoral Forum and Travel Award</p> <p>2021 NSF Graduate Research Fellowship (GRFP)</p> <p>2018 Sigma Xi Nomination</p>	
Activities	<p>2021 Subtle CSCW Traits: Tensions around Identity Formation and Online Activism in the Asian Diaspora, workshop participant.</p> <p>2020 ML Reproducibility Challenge, participant.</p>	
Invited Talks	<p>2021 MD4SG Working Group on Discrimination in Algorithmic Decision-making, Invited Speaker. Online.</p> <p>2019 RabbitMQ Summit, Keynote Speaker. <i>Growing a farm of rabbits to scale financial applications</i>. London, UK.</p> <p>2016 Fragile Families Challenge Scientific Workshop, Invited Speaker. Princeton, NJ.</p>	

Academic Service	ICLR '23	Program Committee
	AIES '21, '22, '23	Program Committee
	FAccT '23	Program Committee
	The Web '24	Program Committee
	NeurIPS '21	Student Volunteer