

David Mingfei Liu

Contact Information

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Employment (post-Ph.D.)

Cornell University (2025 – Present)
Assistant Research Professor¹
Center for Data Science for Enterprise and Society
Mentors: Jon Kleinberg, Maryam Fazel, and Sarah Dean

Education

Northeastern University (2025)
Ph.D., Computer Science
Khoury College of Computer Sciences and Network Science Institute

Princeton University (2018)
B.S.E. in Computer Science with Certificate in Statistics and Machine Learning
summa cum laude

Conference Papers

David Liu, Erik Weis, Moritz Laber, Tina Eliassi-Rad, and Brennan Klein. 2026. Identifying and Upweighting Power-Niche Users to Mitigate Popularity Bias in Recommendations. In *WWW '26*. [\[pdf\]](#)

David Liu, Arjun Seshadri, Tina Eliassi-Rad, and Johan Ugander. 2025. Bypassing Skip-Gram Negative Sampling: Dimension Regularization as a More Efficient Alternative for Graph Embeddings. In *KDD '25*. [\[pdf\]](#)

David Liu, Jackie Baek, and Tina Eliassi-Rad. 2025. When Collaborative Filtering is not Collaborative: Unfairness of PCA for Recommendations. In *FAccT '25*. [\[pdf\]](#)

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

David Liu and Tina Eliassi-Rad. 2023. Identifying and Mitigating Instability in Embeddings of the Degenerate Core. In *SDM '23*. [\[pdf\]](#)

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. In *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 *AIES '22*. [\[pdf\]](#)

¹A three-year non-tenure-track faculty position

	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 <i>AIES '21</i>. [pdf]
Journal Papers	Samantha Dies, David M. Liu, and Tina Eliassi-Rad. 2026. Forecasting faculty placement from patterns in coauthorship networks. <i>EPJ Data Science</i> 15, 1 (2026). [pdf] David Liu and Matthew J. Salganik. Successes and struggles with computational reproducibility: Lessons from the fragile families challenge. <i>Socius</i> 5 (2019). [pdf]
Workshop Papers	David Liu, Haruka Kiyohara, and Sarah Dean. 2026. Data Mixing for Group Preference Heterogeneity in Collaborative Filtering. In <i>Pluralistic Alignment Workshop at ICML</i>. David Liu, Kiran Tomlinson, Jon Kleinberg, and Johan Ugander. 2026. Forecasting Instant Runoff Voting from Polls. In <i>3rd Workshop on New Directions in Social Choice at EC 2026</i>.
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</i> (IC2S2), 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</i> (NetSci), 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</i> (IC2S2), 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 Central Applied Science (CAS)	May 2024 – Aug 2024
	<i>Research Scientist Intern</i>	
	Graph Science and Statistics Research	
	University of California, Berkeley	Fall 2022
	<i>Visiting Graduate Student</i>	
	Simons Institute Program on “Graph Limits and Processes on Networks: From Epidemics to Misinformation”	
	Meta AI (FAIR)	May 2022 – Aug 2022
	<i>AI Research Intern</i>	
	Supervisor: Maximilian Nickel	
	Taraaz	Feb 2022 – Aug 2022, Oct 2023 – Dec 2023
	<i>Researcher</i>	
	Bloomberg LP	Jul 2018 – Sep 2020
	<i>Software Engineer</i>	
	The New York Times	Jun 2017 – Aug 2017
	<i>Software Intern</i>	
Teaching	DS 4400: Machine Learning and Data Mining I	Spring 2024
	Northeastern University – <i>Instructor of Record</i>	
	4 credits, 86 undergraduate students, syllabus	
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	2026	CU Boulder Information Science Seminar. Boulder, CO.
	2024	Brown University CNTR Tech and Society Seminar. Providence, RI.
	2024	Tsinghua University. Beijing, China.
	2024	MSR New England ML Ideas Seminar. Cambridge, MA.
	2021	MD4SG Working Group on Discrimination in Algorithmic Decision-making. 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. Princeton, NJ.