Manish Raghavan

mragh@mit.edu
https://mraghavan.github.io/

EMPLOYMENT

Drew Houston (2005) Career Development Professor August 2022–Present
Massachusetts Institute of Technology, Cambridge, MA
Sloan School of Management and Department of Electrical Engineering and Computer Science

Postdoctoral Fellow August 2021–August 2022
Harvard Center for Research on Computation and Society, Cambridge, MA

Visiting Researcher September 2019–August 2021
Facebook, New York, NY

EDUCATION

Ph.D., Computer Science
Cornell University
Thesis: *The Societal Impacts of Algorithmic Decision-Making.* Advised by Jon Kleinberg.
M.S., Computer Science
Cornell University
B.S., Electrical Engineering and Computer Science
University of California, Berkeley

PUBLICATIONS

Conferences

1. N. Dalvi, M. Olteanu, M. Raghavan, and P. Bohannon. *Deduplicating a Places Database.* In *Proc. 23rd International World Wide Web Conference.* April 2014
2. J. Kleinberg, S. Oren, and M. Raghavan. *Planning Problems for Sophisticated Agents with Present Bias.* In *Proc. 17th ACM Conference on Economics and Computation.* July 2016
3. J. Kleinberg, S. Mullainathan, and M. Raghavan. *Inherent Trade-offs in the Fair Determination of Risk Scores.* In *The 8th Innovations in Theoretical Computer Science Conference.* January 2017
4. M. Olteanu, N. Dalvi, and M. Raghavan. *Identifying descriptive terms associated with a physical location from a location store.* In *U.S. Patent No. 9613054.* April 2017
5. J. Kleinberg, S. Oren, and M. Raghavan. *Planning with Multiple Biases.* In *Proc. 18th ACM Conference on Economics and Computation.* June 2017
6. G. Pleiss, M. Raghavan, F. Wu, J. Kleinberg, K. Weinberger. *On Fairness and Calibration.* In *Proc. 31st Annual Conference on Neural Information Processing Systems.* December 2017
7. J. Kleinberg, M. Raghavan. *Selection Problems in the Presence of Implicit Bias.* In *The 9th Innovations in Theoretical Computer Science Conference.* January 2018
8. M. Raghavan, A. Anderson, J. Kleinberg. *Mapping the Invocation Structure of Online Political Interaction.* In *Proc. 27rd International World Wide Web Conference.* April 2018
9. M. Raghavan, A. Slivkins, J. W. Vaughan, Z. S. Wu. *The Externalities of Exploration and How Data Diversity Helps Exploitation.* In *Conference on Learning Theory.* July 2018
10. M. Raghavan, M. Purohit, S. Gollapudi. *Hiring Under Uncertainty.* In *International Conference on Machine Learning.* June 2019
11. M. Raghavan, S. Barocas. *Challenges for mitigating bias in algorithmic hiring.* In *The Brookings Institution.* December 2019

12. R. Abebe, S. Barocas, J. Kleinberg, K. Levy, M. Raghavan, D. G. Robinson. *Roles for Computing in Social Change*. In *Proc. Third ACM Conference on Fairness, Accountability, and Transparency*. January 2020
13. S. Barocas, A. D. Selbst, M. Raghavan. *The Hidden Assumptions Behind Counterfactual Explanations and Principal Reasons*. In *Proc. Third ACM Conference on Fairness, Accountability, and Transparency*. January 2020
14. M. Raghavan, S. Barocas, J. Kleinberg, K. Levy. *Mitigating Bias in Algorithmic Hiring: Evaluating Claims and Practices*. In *Proc. Third ACM Conference on Fairness, Accountability, and Transparency*. January 2020
15. J. Finocchiaro, R. Maio, F. Monachou, G. K. Patro, M. Raghavan, A.-A. Stoica, and S. Tsirtis. *Bridging Machine Learning and Mechanism Design towards Algorithmic Fairness*. In *Proc. Fourth ACM Conference on Fairness, Accountability, and Transparency*. January 2021
16. J. Kleinberg, S. Oren, M. Raghavan, and N. Sklar. *Stochastic Model for Sunk Cost Bias*. In *Proc. 37th Conference on Uncertainty in Artificial Intelligence*. July 2021
17. E. Black, M. Raghavan, and S. Barocas. *Model Multiplicity: Opportunities, Concerns, and Solutions*. In *Proc. Fourth ACM Conference on Fairness, Accountability, and Transparency*. June 2022
18. C. Hays, Z. Schutzman, M. Raghavan, E. Walk, P. Zimmer. *Simplistic Collection and Labeling Practices Limit the Utility of Benchmark Datasets for Twitter Bot Detection*. In *The Web Conference*. April 2023
19. R. Alur, L. Laine, D. Li, M. Raghavan, D. Shah, D. Shung. *Auditing for Human Expertise*. In *Proc. 37th Annual Conference on Neural Information Processing Systems*. December 2023
20. C. Dwork, C. Hays, J. Kleinberg, M. Raghavan. *Content Moderation and the Formation of Online Communities: A Theoretical Framework*. In *The Web Conference*. May 2024
21. K. Peng, M. Raghavan, E. Pierson, J. Kleinberg, N. Garg. *Reconciling the accuracy-diversity trade-off in recommendations*. In *The Web Conference*. May 2024

Journals

1. J. Kleinberg, M. Raghavan. *How Do Classifiers Induce Agents To Invest Effort Strategically?*. In *ACM Transactions on Economics and Computation*. October 2020
   Also appeared as:
   How Do Classifiers Induce Agents To Invest Effort Strategically?. In *Proc. 20th ACM Conference on Economics and Computation*. June 2019
   Designing Evaluation Rules that are Robust to Strategic Behavior. In *Proc. 34th AAAI Conference on Artificial Intelligence, Sister Conference Track*. April 2020
   Algorithmic Classification and Strategic Effort. In *SIGecom Exchanges*. November 2020
2. J. Kleinberg and M. Raghavan. *Algorithmic Monoculture and Social Welfare*. In *Proc. National Academy of Sciences 118(22)*. June 2021
3. M. Raghavan, A. Slivkins, J. W. Vaughan, Z. S. Wu. *Greedy Algorithm Almost Dominates in Smoothed Contextual Bandits*. In *SIAM Journal on Computing 52(2)*. April 2023
4. J. Kleinberg, S. Mullainathan, and M. Raghavan. *The Challenge of Understanding What Users Want: Inconsistent Preferences and Engagement Optimization*. In *Management Science*. November 2023
   Also appeared in *Proc. 23rd ACM Conference on Economics and Computation*. July 2022
5. C. K. Morewedge, S. Mullainathan, H. F. Naushan, C. R. Sunstein, J. Kleinberg, M. Raghavan, and J. O. Ludwig. *Human Bias in Algorithm Design*. In *Nature Human Behavior*. November 2023
6. J. Kleinberg, J. Ludwig, S. Mullainathan, and M. Raghavan. *The Inversion Problem: Why Algorithms Should Infer Mental State and Not Just Predict Behavior*. In *Perspectives on Psychological Science*. December 2023
7. M. Raghavan and P. T. Kim. *Limitations of the "Four-Fifths Rule" and Statistical Parity Tests for Measuring Fairness*. In *Georgetown Law Technology Review*. January 2024
8. M. Raghavan. *What Should We Do when Our Ideas of Fairness Conflict?*. In *Communications of the ACM*. January 2024

TEACHING

6.3950/6.3952: Artificial Intelligence, Decision-Making, and Society. *MIT*
Fall 2022 (with Aleksander Mądry and Ashia Wilson); Fall 2023 (with Ashia Wilson)
15.563: Artificial Intelligence for Business. *MIT*
Spring 2023; Spring 2024

AWARDS AND HONORS

Cornell University Fellowship	2016–2017
NSF GRFP Fellowship	2017–2021
Microsoft Research PhD Fellowship	2018–2020
SIGecom Doctoral Dissertation Award Honorable Mention	2021
ACM Doctoral Dissertation Award	2021
Cornell University Department of Computer Science PhD Dissertation Award	2022
ACM EC Exemplary Applied Modeling Track Paper Award	2022
The Web Conference Best Paper Award	2023

INVITED TALKS

Planning Problems for Sophisticated Agents with Present Bias

Social Impact through Network Science. Venice, Italy	June 8–10, 2016
Young Researcher Workshop on Economics and Computation. Tel Aviv, Israel	January 1–5, 2017

Algorithmic Fairness and Bias

Deloitte Data Scientist Speaker Series. Virtual	September 7, 2018

Mitigating Bias in Algorithmic Hiring: Evaluating Claims and Practices

Fairness and Equity in Hiring Selection Algorithms. Upturn, Washington D.C.	October 4, 2019
ASSA Session on Auditing and Regulating AI Systems. Virtual	January 7, 2022
5th IDSC of IZA Workshop: Matching Workers and Jobs Online (Keynote). Virtual	September 16, 2022

Algorithmic Fairness in Practice

Walmart Community of Practice. Virtual	August 26, 2020

The Societal Impacts of Algorithmic Decision-Making

Netflix Research Seminar.	May 21, 2021
Sai University Frontiers Seminar. Virtual	November 23, 2021

The Challenge of Understanding What Users Want: Inconsistent Preferences and Engagement Optimization

NYU Data Science Seminar. Virtual	April 6, 2022
Harvard EconCS Seminar. Virtual	April 8, 2022
Facebook Core Data Science Seminar. Virtual	May 6, 2022
MIT Initiative on the Digital Economy seminar. Virtual	October 4, 2022
INFORMS Annual Meeting. Indianapolis, IN	October 18, 2022
Opportunity Insights. Cambridge, MA	October 26, 2022
JHU Behavioral Science Forum on Technology and Social Change. Baltimore, MD	October 28, 2022
UIUC Responsible Data Science and AI seminar. Virtual	November 4, 2022
INFORMS Annual Meeting. Phoenix, AZ	October 16, 2023

Measuring Fairness

FinRegLab Advisory Board. Virtual July 14, 2021

Understanding Societal Impacts through Machine Learning and Mechanism Design: Automated Hiring as a Case Study
Israel Algorithmic Game Theory Seminar. Virtual October 19, 2021

The Future of AI in Financial Services (Panel)
Artificial Intelligence and the Economy. U.S. Dept. of Commerce, Washington D.C. April 27, 2022

Reflections on Incentivizing Behavior through Evaluation
Algorithmic Contract Design: Present and Future (EC '22 Workshop). Boulder, CO July 15, 2022

Responsible AI and the Role of Measurement
Network Architecture for Geeks. Virtual September 21, 2022
Sai University Frontiers Seminar. Virtual November 17, 2022
Wells Fargo Data Ethics. Virtual April 26, 2023
Fujitsu x MIT Knowledge Session. Virtual May 16, 2023

Is AI the New HR? Protecting Civil Rights at Work (Panel)
South by Southwest. Austin, TX March 11, 2023

Generative AI and Employment
MIT Generative AI week. Cambridge, MA November 30, 2023

SERVICE AND ORGANIZATION

International Advisory Board, Sai University (Chennai, India) 2021–Present

Program Committees

- ACM Conference on Fairness, Accountability, and Transparency: 2020, 2021, 2022 (Area Chair), 2023 (Area Chair)
- ACM Conference on Economics and Computation: 2019, 2020, 2021, 2022
- ACM Conference on Equity and Access in Algorithms, Mechanisms, and Optimization: 2021, 2022, 2023 (Area Chair)
- Conference on Neural Information Processing Systems: 2021
- Conference on Web and Internet Economics: 2021
- AAAI Conference on Artificial Intelligence: 2020, 2021
- International Conference on Learning Representations: 2021
- The Web Conference: 2024 (Senior Area Chair)

Workshops and tutorials

- Fairness and Discrimination through the Dual Lenses of Mechanism Design and Machine Learning (EC '21)
- Fair and Socially Responsible ML for Recommendations: Challenges and Perspectives (NeurIPS '22)

Journal Reviewing
Journal of Machine Learning Research, Proceedings of the National Academy of Sciences, Artificial Intelligence, Management Science, Patterns, and others

Coaching 2021–Present
Harvard Men's Soccer Club