

# Manish Raghavan

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## EMPLOYMENT

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**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

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**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

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### 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. 27th 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. J. Kleinberg, M. Raghavan. *How Do Classifiers Induce Agents To Invest Effort Strategically?*. In *Proc. 20th ACM Conference on Economics and Computation*. June 2019

Also appeared as:

- 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
12. M. Raghavan, S. Barocas. *Challenges for mitigating bias in algorithmic hiring.* In *The Brookings Institution*. December 2019
  13. 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
  14. 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
  15. 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
  16. 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
  17. 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
  18. 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
  19. J. Kleinberg, S. Mullainathan, and M. Raghavan. *The Challenge of Understanding What Users Want: Inconsistent Preferences and Engagement Optimization.* In *Proc. 23rd ACM Conference on Economics and Computation*. July 2022
  20. 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
  21. 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

## Journals

1. J. Kleinberg, M. Raghavan. *How Do Classifiers Induce Agents To Invest Effort Strategically?* In *ACM Transactions on Economics and Computing*. October 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

## TEACHING

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**6.3950/6.3952: Artificial Intelligence, Decision-Making, and Society.** MIT

Fall 2022 (with Aleksander Madry and Ashia Wilson)

**15.563: Artificial Intelligence for Business.** MIT

Spring 2023

**6.3950/6.3952: Artificial Intelligence, Decision-Making, and Society.** MIT

Fall 2023 (with Ashia Wilson)

## AWARDS AND HONORS

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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

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### Planning Problems for Sophisticated Agents with Present Bias

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

### Algorithmic Fairness and Bias

<i>Deloitte Data Scientist Speaker Series</i> . Virtual	September 7, 2018
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### Mitigating Bias in Algorithmic Hiring: Evaluating Claims and Practices

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

### Algorithmic Fairness in Practice

<i>Walmart Community of Practice</i> . Virtual	August 26, 2020
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### The Societal Impacts of Algorithmic Decision-Making

<i>Netflix Research Seminar</i> .	May 21, 2021
<i>Sai University Frontiers Seminar</i> . Virtual	November 23, 2021

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

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

### Measuring Fairness

<i>FinRegLab Advisory Board</i> . Virtual	July 14, 2021
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### Understanding Societal Impacts through Machine Learning and Mechanism Design: Automated Hiring as a Case Study

<i>Israel Algorithmic Game Theory Seminar</i> . Virtual	October 19, 2021
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### The Future of AI in Financial Services (Panel)

<i>Artificial Intelligence and the Economy</i> . U.S. Dept. of Commerce, Washington D.C.	April 27, 2022
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### Reflections on Incentivizing Behavior through Evaluation

<i>Algorithmic Contract Design: Present and Future (EC '22 Workshop)</i> . Boulder, CO	July 15, 2022
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### Responsible AI and the Role of Measurement

<i>Network Architecture for Geeks</i> . Virtual	September 21, 2022
<i>Sai University Frontiers Seminar</i> . Virtual	November 17, 2022
<i>Wells Fargo Data Ethics</i> . 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

## SERVICE AND ORGANIZATION

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**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 Computing: 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

### 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

*Harvard Men's Soccer Club*

2021–Present