

# Meena Jagadeesan

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## Summary

I'm a 3rd year Computer Science PhD student at UC Berkeley, where I'm a member of the Berkeley AI Research Lab (BAIR) and the Theory Group. My research aims to develop theoretical foundations for machine learning and algorithmic decision-making.

## Education

### UC Berkeley

PHD IN COMPUTER SCIENCE

- Advised by Michael I. Jordan and Jacob Steinhardt
- Selected Honors: EECS Excellence Award

*Berkeley, CA, USA*

*Aug. 2020 - Present*

### Harvard University

S.M. IN COMPUTER SCIENCE

*Cambridge, MA, USA*

*Sept. 2019- May 2020*

### Harvard University

A.B. IN COMPUTER SCIENCE AND MATH, *summa cum laude*

- Secondary Field: Statistics
- Selected Honors: Phi Beta Kappa, Hoopes Prize, Detur Book Prize, Certificate of Distinction in Teaching

*Cambridge, MA, USA*

*Sept. 2016- May 2020*

### Phillips Exeter Academy

HIGH SCHOOL DIPLOMA

*Exeter, NH, USA*

*Sept. 2012- June 2016*

## Fellowships

**Open Philanthropy AI Fellowship** (2021-2025)

**Paul and Daisy Soros Fellowship for New Americans** (2020-2022)

**Berkeley Fellowship** (2020-2023)

**Siebel Scholarship** (2019-2020)

## Honors & Awards

**CRA Outstanding Undergraduate Researcher Award** (2020)

**Barry Goldwater Scholar** (2018)

**Intel Science Talent Search, 2nd Place in Basic Research** (2016)

**Davidson Fellow Laureate** (2016)

## Publications

(\* denotes equal contribution;  $\alpha$ - $\beta$  denotes alphabetical ordering)

### PREPRINTS:

- **Competition, Alignment, and Equilibria in Digital Marketplaces.** *Manuscript under submission.*  
Meena Jagadeesan, Michael I. Jordan, and Nika Haghtalab.
- **Supply-Side Equilibria in Recommender Systems.** *Manuscript under submission.*  
Meena Jagadeesan, Nikhil Garg, and Jacob Steinhardt.
- **Performative Power.** *Manuscript under submission.*  
( $\alpha$ - $\beta$ ) Moritz Hardt, Meena Jagadeesan, and Celestine Mendler-Dünnér.

### CONFERENCE AND JOURNAL PAPERS:

- **Regret Minimization with Performative Feedback.** *Proceedings of the 39th International Conference on Machine Learning (ICML), 9760-9785, 2022.*  
Meena Jagadeesan, Tijana Zrnic, and Celestine Mendler-Dünnér.
- **Inductive Bias of Multi-Channel Linear Convolutional Networks with Bounded Weight Norm.** *Proceedings of the 35th Annual Conference on Learning Theory (COLT), 2276-2325, 2022.*  
Meena Jagadeesan, Ilya Razenshteyn, and Suriya Gunasekar.

- **Individual Fairness in Advertising Auctions through Inverse Proportionality.** *Proceedings of the 13th Innovations in Theoretical Computer Science Conference (ITCS)*, 42:1-42:21, 2022.  
( $\alpha$ - $\beta$ ) Shuchi Chawla and Meena Jagadeesan.
- **Learning Equilibria in Matching Markets from Bandit Feedback.** *Proceedings of the 35th Conference on Neural Information Processing Systems (NeurIPS)*, 2021. [NeurIPS 2021 Spotlight presentation \(given to 10% of accepted papers\)](#).  
Meena Jagadeesan\*, Alexander Wei\*, Yixin Wang, Michael I. Jordan, Jacob Steinhardt.
- **Alternative Microfoundations for Strategic Classification.** *Proceedings of the 38th International Conference on Machine Learning (ICML)*, pg. 4687-4697, 2021.  
Meena Jagadeesan, Celestine Mendler-Dünner, and Moritz Hardt.
- **Cosine: A Cloud-Cost Optimized Self-Designing Key-Value Storage Engine.** *Proceedings of Very Large Data Base Endowment (VLDB)*, pg. 112-126, 2021.  
Subarna Chatterjee, Meena Jagadeesan, Wilson Qin, and Stratos Idreos.
- **Multi-Category Fairness in Sponsored Search Auctions.** *Proceedings of the 3rd ACM Conference on Fairness, Accountability and Transparency (FAT\*)*, pp. 348–358, 2020.  
Christina Ilvento\*, Meena Jagadeesan\*, and Shuchi Chawla.
- **Individual Fairness in Pipelines.** *Proceedings of the 1st Conference on Foundations of Responsible Computation (FORC)*, pp. 7:1–7:22, 2020.  
( $\alpha$ - $\beta$ ) Cynthia Dwork, Christina Ilvento, and Meena Jagadeesan.
- **Understanding Sparse JL for Feature Hashing.** *Proceedings of the 33rd Annual Conference on Neural Information Processing Systems (NeurIPS)*, pp. 15177-15187, 2019. [NeurIPS 2019 Oral presentation \(given to 3% of accepted papers\)](#).  
Meena Jagadeesan.
- **Simple Analysis of Sparse, Sign-Consistent JL.** *Proceedings of the 23rd International Conference on Randomization and Computation (RANDOM)*, pp. 61:1–61:20, 2019.  
Meena Jagadeesan.
- **Varying the Number of Signals in Matching Markets.** *Proceedings of the 14th International Conference on Web and Internet Economics (WINE)*, pp. 232-245, 2018.  
Meena Jagadeesan\* and Alexander Wei\*.
- **Dyson’s Partition Ranks and their Multiplicative Extensions.** *The Ramanujan Journal*, Vol. 45, Issue 3, pp. 817–839, April 2018.  
( $\alpha$ - $\beta$ ) Elaine Hou and Meena Jagadeesan.
- **Mobius Polynomials of Face Posets of Convex Polytopes.** *Communications in Algebra*, Vol. 44, Issue 11, pp. 4945-4972, 2016.  
Meena Jagadeesan and Susan Durst.

## SHORT CONFERENCE PAPERS:

- **From Worst-Case to Average-Case Analysis: Accurate Latency Predictions for Key-Value Storage Engines.** *Proceedings of the ACM International Conference on Management of Data (SIGMOD)*, pp. 2853-3855, 2020. [1st Place at SIGMOD SRC](#).  
Meena Jagadeesan\* and Garrett Tanzer\*.

## Theses

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- **The Performance of Johnson-Lindenstrauss Transforms: Beyond the Classical Setting.** *Undergraduate Thesis. Awarded Hoopes Prize.*  
Advised by Prof. Jelani Nelson.

## Talks

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- *INFORMS Annual Meeting, Responsible, Ethical, and Socially Aware Operations Session (upcoming) (10/16/22): “Performative Power”.*
- *Northwestern University CS Seminar and Institute for Data, Econometrics, Algorithms, and Learning (IDEAL Institute) Seminar (9/7/22): “Learning Equilibria in Matching Markets with Bandit Feedback”.*
- *Northwestern University CS Seminar and Institute for Data, Econometrics, Algorithms, and Learning (IDEAL Institute)*

- Seminar (9/6/22): "Machine Learning in Digital Marketplaces: Interactions between Learners, Consumers, and Producers"*.
- ICML (7/21/22): "Regret Minimization with Performative Feedback"*.
- COLT (7/3/22): "Inductive Bias of Multi-Channel Linear Convolutional Networks with Bounded Weight Norm"*.
- INFORMS Revenue Management and Pricing (RMP) Workshop (6/22/22): "Supply-Side Equilibria in Recommender Systems"*.
- Workshop on Algorithms for Learning and Economics (WALE) (6/16/22): "Regret Minimization with Performative Feedback"*.
- Workshop on Algorithms for Learning and Economics (WALE) (6/15/22): "Competition, Alignment, and Equilibria in Digital Marketplaces"*.
- ITCS (2/1/22): "Individual Fairness in Advertising Auctions through Inverse Proportionality"*.
- ITCS (2/1/22): "Individual Fairness in Advertising Auctions through Inverse Proportionality"*.
- ICML (7/21/21): "Alternative Microfoundations for Strategic Classification"*.
- FORC (6/10/21): "Individual Fairness in Advertising Auctions through Inverse Proportionality"*.
- Google Research Algorithms Seminar (5/20/21): "Alternative Microfoundations for Strategic Classification"*.
- MIT Algorithms & Complexity Seminar (4/7/21): "Inductive Bias of Multi-Channel Linear Convolutional Networks with Bounded Weight Norm"*.
- INFORMS Annual Meeting, Market Algorithms Session (11/11/20): "Fairness in Advertising Auctions"*.
- Microsoft Research MLO Group Seminar (6/24/20): "Understanding Sparse Johnson-Lindenstrauss Transforms for Feature Hashing"*.
- Algorithmic Game Theory Mentoring Workshop at ACM EC (6/15/20): "Fairness in Advertising Auctions"*.
- ACM FAT\* (1/29/20): "Multi-Category Fairness in Sponsored Search Auctions"*.
- NeurIPS (12/12/19): "Understanding Sparse JL for Feature Hashing"*.
- RANDOM (9/21/19): "Simple Analysis of Sparse, Sign-Consistent JL"*.
- University of Wisconsin-Madison Theory Seminar (5/17/19): "Analyzing Johnson-Lindenstrauss Transforms"*.
- WINE (12/17/18): "Varying the Number of Signals in Matching Markets"*.
- Workshop on Frontiers of Market Design at ACM EC (6/22/18): "Varying the Number of Signals in Matching Markets"*.

## Industry Experience

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### Microsoft Research

UNDERGRADUATE RESEARCH INTERN

- Mentors: Suriya Gunasekar and Ilya Razenshteyn (Machine Learning and Optimization Group in MSR AI)

Redmond, WA

May 2020 - Aug. 2020

### Microsoft

SOFTWARE ENGINEER/PROGRAM MANAGER INTERN

San Francisco, CA

May 2018 - Aug. 2018

## Teaching and Service

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### Reviewer/Sub-Reviewer

2019-

- Reviewed submissions for MATCHUP 2022, ICML 2022, ACM FAccT 2022, ICLR 2022, NeurIPS 2021, ICML 2021, ACM FAccT 2021, STACS 2021, ITCS 2021, SOSA 2021, Management Science, and JAIR.

### Co-President of Women in CS and EE (WICSE)

2022-2023

- WICSE aims at building a community between womxn graduate students and creating a welcoming and supportive environment for them throughout their graduate studies.

### Graduate Student Instructor for UC Berkeley CS 281A

Aug. 2021 - Dec. 2021

- Graduate-level introductory course on Statistical Learning Theory at UC Berkeley.

### Teaching Fellow for Harvard CS 61

Sept. 2018 - Dec. 2018

- CS 61 is Harvard's introductory systems programming class for computer science undergraduates, taught by Prof. Eddie Kohler. I led a biweekly discussion section and weekly Office Hours, helped design section materials, and graded problem sets. [Awarded a Certification of Distinction in Teaching.](#)