Meena Jagadeesan

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Summary

I'm a 2nd 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 — *Berkeley, CA, USA*
PhD in Computer Science — *Aug. 2020 - Present*
- Advised by Michael I. Jordan and Jacob Steinhardt
- Selected Honors: EECS Excellence Award

Harvard University — *Cambridge, MA, USA*
S.M. in Computer Science — *Sept. 2019- May 2020*

Harvard University — *Cambridge, MA, USA*
A.B. in Computer Science and Math, *summa cum laude* — *Sept. 2016- May 2020*
- Secondary Field: Statistics
- Selected Honors: Phi Beta Kappa, Hoopes Prize, Detur Book Prize, Certificate of Distinction in Teaching

Phillips Exeter Academy — *Exeter, NH, USA*
High School Diploma — *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; α-β 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*.
  (α-β) Moritz Hardt, Meena Jagadeesan, and Celestine Mendler-Dünner.

Conference and Journal Papers:

- **Regret Minimization with Performative Feedback**. *Proceedings of the 39th International Conference on Machine Learning (ICML), 2022, to appear*.
  Meena Jagadeesan, Tijana Zrnic, and Celestine Mendler-Dünner.
- **Inductive Bias of Multi-Channel Linear Convolutional Networks with Bounded Weight Norm**. *Proceedings of the 35th Annual Conference on Learning Theory (COLT), 2022, to appear*.
  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*.
  (α-β) 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, 2022*.
  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*.
  (α-β) 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*.
  (α-β) 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

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

Talks

- *ICML* (upcoming): "Regret Minimization with Performative Feedback".
- *COLT* (upcoming): "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 (upcoming)".
- *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

Microsoft Research — *Redmond, WA*
Undergraduate Research Intern — *May 2020 - Aug. 2020*

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

Microsoft — *San Francisco, CA*
Software Engineer/Program Manager Intern — *May 2018 - Aug. 2018*

Teaching and Service

Reviewer/Sub-Reviewer — *2019-*

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

Graduate Student Instructor for UC Berkeley CS 281A — *Aug. 2021 - Dec. 2021*

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

Co-organizer of Breakout Session at WiML Unworkshop at ICML 2021 — *7/21/21*

- Co-organized a breakout session titled "Decision-Making in Social Settings: Addressing Strategic Feedback Effects" at the Women in Machine Learning Unworkshop.

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.