Sai Srivatsa Ravindranath

CONTACT INFORMATION

Harvard University
5.428, Science and Engineering Campus, Allston, MA

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INTERESTS

Machine Learning
Deep Learning, Differentiable Programming

Economics and Computation
Multi-agent systems, Market Design, Game Theory, Algorithmic Economics

EDUCATION

Harvard University (July 2020 - Present)
Ph.D candidate in Computer Science
Advisor: Prof. David Parkes

Indian Institute of Technology, Kharagpur
B. Tech (with Honors) in EE, Minor in CS

WORK EXPERIENCE

Google Research
Sequential Auctions through Deep Reinforcement Learning
Student Researcher, Market Algorithms Team

Microsoft Research
Large-scale Multi-label learning and Recommendation Systems
Research Fellow, Machine Learning and Optimization Group

JOURNAL PUBLICATIONS

$^{\alpha}$ *denotes alphabetical ordering of authors*

Optimal Auctions through Deep Learning: Advances in Differential Economics$^{\alpha}$
P. Dutting, Z. Feng, H. Narasimhan, DC. Parkes, SS. Ravindranath.
- Journal of the ACM (JACM), September 2023
  DOI: https://dl.acm.org/doi/10.1145/3630749
- Communications of the ACM, Volume 64 (8), August 2021
  DOI: https://dl.acm.org/doi/10.1145/3470442

CONFERENCE PUBLICATIONS

Deep Reinforcement Learning for Sequential Combinatorial Auctions
SS. Ravindranath, Z. Feng, D. Wang, M. Zaheer, A. Mehta, DC. Parkes
Under submission

Deep Learning for Two-Sided Matching
SS. Ravindranath, Z. Feng, S. Li, J. Ma, SD. Kominers, DC. Parkes
Under submission
ArXiv: https://arxiv.org/pdf/2107.03427.pdf

Data Market Design through Deep Learning
SS. Ravindranath*, Y. Jiang*, DC. Parkes
Thirty-Seventh Conference on Neural Information Processing Systems (NeurIPS 2023)
ArXiv: https://arxiv.org/pdf/2310.20096.pdf

From Predictions to Decisions: Using Lookahead Regularization
N. Rosenfeld, S. Hilgard, SS. Ravindranath, DC. Parkes
Thirty-Fourth Conference on Neural Information Processing Systems (NeurIPS 2020)
ArXiv: https://arxiv.org/pdf/2006.11638.pdf

Optimal Auctions through Deep Learning$^{\alpha}$
P. Dutting, Z. Feng, H. Narasimhan, DC. Parkes, SS. Ravindranath.
Thirty-Sixth International Conference on Machine Learning (ICML 2019)
ArXiv: https://arxiv.org/pdf/1706.03459.pdf

Salient Object Detection via Objectness Measure
SS. Ravindranath, RV. Babu
Twenty-Second International Conference on Image Processing (ICIP 2015)
ArXiv: https://arxiv.org/pdf/1506.07363.pdf

Book Chapters

Machine Learning for Matching Markets$^{\alpha}$
Z. Feng, DC. Parkes, SS. Ravindranath.
In F. Echenique N. Immorlica and V. Vazirani, editors
Online matching theory and market design. Cambridge University Press, 2022.

Machine Learning for Optimal Economic Design$^{\alpha}$
P. Dutting, Z. Feng, N. Golowich, H. Narasimhan, DC. Parkes, SS. Ravindranath.
In JF Laslier, H. Moulin, MR. Sanver, WS. Zwicker, editors,
The Future of Economic Design. Springer, 2019

Technical Workshops

Deep Learning for Two-Sided Matching
SS. Ravindranath, Z. Feng, S. Li, J. Ma, SD. Kominers, DC. Parkes
Sixth International Workshop on Matching Under Preferences (MATCH-UP 2022)
ArXiv: https://arxiv.org/pdf/2107.03427.pdf

Learning Objective functions for Improved Image retrieval
SS. Ravindranath, M. Gygli, LV. Gool
MediaEval Workshops, 2015.

Scholarships, Achievements

Inspire Fellowship for Higher Education
Program by Dept. of Science and Technology, Govt. of India

Kishore Vaigyanik Protsahan Yojna Fellowship (KVPY)
Awarded to top 250 students in India by Dept. of Science and Technology, Govt. of India

Certificate of Merit in:

- Indian National Mathematics Olympiad (INMO)
- National Standard Examinations in Chemistry (NSEC).
- National Standard Examinations in Physics (NSEP).

National Talent Search Scholarship (NTSE)
Awarded to top 1000 high school students in India by NCERT

Teaching

CS 136: Economics and Computation (Teaching Fellow)
Harvard University, Fall 2021

Service

Reviewer
ICML 2024, NeuRIPS 2023, ICLR 2023, NeurIPS 2022, ICLR 2022 Gamification and Multiagent Solutions Workshop, NeurIPS 2021