Roshni Sahoo

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Education

Stanford University 9/2020 - Current
PhD Student, Computer Science.
Advisor: Stefan Wager

Massachusetts Institute of Technology 9/2016 - 6/2020
B.S. in Computer Science and Engineering, B.S. in Mathematics, and Minor in Literature.
GPA: 4.9/5.0.

Preprints

† indicates alphabetical author order.

1. Lei†, Lihua, Roshni Sahoo†, Stefan Wager†. (2023) Policy Learning under Biased Sample Selection. *Arxiv e-prints*, *abs/2304.11735*.
2. Sahoo, Roshni, Lihua Lei, Stefan Wager. (2022) Learning from a Biased Sample. *Arxiv e-prints*, *abs/2209.01754*. Under Review.
3. Sahoo, Roshni, Stefan Wager. (2022) Policy Learning with Competing Agents. *Arxiv e-prints*, *abs/2204.01884*. Major Revision at *Operations Research*.

Publications

1. Sahoo, Roshni, Shengjia Zhao, Alyssa Chen, Stefano Ermon. (2021) Reliable Decisions with Threshold Calibration. *Advances in Neural Information Processing Systems.*
2. Zhao, Shengjia, Michael P. Kim, Roshni Sahoo, Tengyu Ma, Stefano Ermon. (2021) Calibrating Predictions to Decisions: A Novel Approach to Multi-Class Calibration. *Advances in Neural Information Processing Systems.*
3. Gilitschenski, Igor, Roshni Sahoo, Wilko Schwarting, Alexander Amini, Sertac Karaman, Daniela Rus. (2020) Deep Orientation Uncertainty Learning based on a Bingham Loss. In *International Conference on Learned Representations.*

Talks

1. *Policy Learning under Biased Sample Selection.*
   Emma Brunskill Group Meeting, Stanford University — May 2023
   Machine Learning Lunch, Stanford University — April 2023
   Causal Inference Seminar, Stanford University — April 2023
2. *Learning from a Biased Sample.*
   INFORMS — October 2023 (scheduled)
   Joint Statistical Meetings — August 2023 (scheduled)
   Data Science for Social Good Summer Program, Stanford University — August 2023 (scheduled)
   MIDAS Future Leaders Summit, University of Michigan — April 2023
   Machine Learning Lunch, Stanford University — November 2022
   Algorithmic Fairness Seminar, Stanford University — October 2022
   Causal Inference Seminar, Stanford University — September 2022
3. *Policy Learning with Competing Agents.*
   Causal Science Conference, Stanford University — November 2022
   ACM EAAMO — October 2022

Algorithmic Fairness Seminar, Stanford University — April 2022
Causal Inference Seminar, Stanford University — April 2022
Machine Learning Lunch, Stanford University — March 2022

4. *Deep Orientation Uncertainty Learning based on a Bingham Loss.*
   Schlumberger Robotics and Intelligent Automation Webinar — June 2020

Workshops

1. *Policy Learning under Biased Sample Selection.*
   American Causal Inference Conference — 2023
   Stanford Data Science Conference — 2023
2. *Learning from a Biased Sample.*
   Statistical Foundations of Data Science and their Applications, Princeton University — 2023
   Stanford-Berkeley Women in CS/EE Research Meetup — 2023
   Societal Considerations and Applications Workshop, Simons Institute — 2022
3. *Policy Learning with Competing Agents.*
   American Causal Inference Conference Poster Session — 2022
   Theory of Computation Associated - Silicon Valley — 2022
   Stanford-Berkeley Women in CS/EE Research Meetup — 2022
4. *Calibrating Predictions to Decisions: A Novel Approach to Multi-Class Calibration.*
   Spotlight at Distribution-Free Uncertainty Quantification Workshop, ICML — 2021
5. *Reliable Decisions with Threshold Calibration.*
   Distribution-Free Uncertainty Quantification Workshop, ICML — 2021
6. *Tree Covers: An Alternative to Metric Embeddings.*
   Differential Geometry Meets Deep Learning Workshop — 2020
7. *Unsupervised Domain Adaptation in the Absence of Source Data.*
   Uncertainty and Robustness in Deep Learning Workshop Poster Session, ICML — 2020
8. *Deep Orientation Uncertainty Learning based on a Bingham Loss.*
   Women in Data Science, Cambridge Workshop Poster Session — 2020
   MIT Institute on the Foundations of Data Science Workshop — 2020
9. *Running Sums and Stopping Times of Various Probability Distributions.*
   Outstanding Poster at MAA Undergraduate Poster Session, Joint Mathematics Meetings — 2016

Honors and Awards

Spectrum Population Health Sciences Pilot Grant Recipient ($12,000) — 2023
Stanford Data Science Scholar Award — 2022
McCoy Family Center for Ethics in Society Graduate Fellowship — 2021
NSF Graduate Research Fellowship — 2020
Phi Beta Kappa Honor Society — 2020
Kelly-Douglas Traveling Fellowship — 2019
Angle Undergraduate Research and Innovation Scholar — 2019
IEEE Eta Kappa Nu (HKN) Honor Society — 2019
MIT Burchard Scholar — 2018
Massachusetts Academic Decathlon State Champion — 2016
Siemens Research Competition National Semifinalist — 2015

Academic Service

Mentoring

Melissa Liu (Stanford undergrad)	2023 - Current

Outreach

Mentor, Stanford FAST (Future Advancers of Science and Technology)	9/2021 - Current
Chair, Stanford Graduate Women in Computer Science	9/2022 - Current
Organizer, Stanford Computing and Society	12/2020 - 4/2023
Mentor, Stanford CS Mentorship Program	9/2020 - 9/2021
Mentor, Stanford First-Generation and/or Low-Income (FLI) Mentorship Program	9/2020 - 9/2021

Teaching

Instructor, Cambridge Math Circle, Cambridge, MA	3/2020 - 6/2020
Teaching Assistant, Introduction to Deep Learning, MIT	1/2020
Tutoring Chair, HKN (EECS department), MIT	5/2019 - 5/2020
Instructor, Beautiful Patterns, Aguascalientes, Mexico.	5/2019
HKN Tutor, MIT	9/2018 - 6/2019
Lab Assistant, Elements of Software Construction, MIT	2/2018 - 6/2018
Instructor, Global Teaching Labs, Barcelona, Spain	1/2018 - 2/2018

Reviewing

Journals: (# of papers in parentheses) Biometrika (1), Journal of the Royal Statistical Society: Series B (1), Journal of the American Statistical Association (1), Journal of Econometrics (1).
Conferences: FORC 2023, ACM FAccT 2023, NeurIPS 2023.

Committees

Program Committee, ACM FAccT	2023
Marketing Committee Lead, Stanford Data Science Conference	2023

Other

Discussant of "Principal-Agent Hypothesis Testing," International Seminar of Selective Inference.	2022
Panelist for Stanford AI4ALL.	2022

Industry

Modeling Engineering Intern, Two Sigma	6/2019 - 8/2019
Software Engineering Intern, Cruise Automation	6/2018 - 8/2018
Machine Learning Intern, Northrop Grumman	6/2017 - 8/2017