Roshni Sahoo

rsahoo@stanford.edu, roshni714.github.io
she/her

Education

Stanford University 9/2020 - 6/2026
Ph.D. in Computer Science.
Advisor: Stefan Wager.

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

Experience

Student Researcher, Algorithms and Optimization Team, Google NYC 6/2024 - 9/2024
Software 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

Preprints

$\alpha\beta$ indicates alphabetical author order, † denotes trainee author.

1. ($\alpha\beta$) 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 at *Management Science*.
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. *Data Leakage in Recommendation System A/B Tests*
   Bridging Industry and Academia in Causal Data Science Workshop 11/2024
   Omega-Causal, Google Research, NYC 7/2024

2. *Learning Targeted Transfers*

Guest Lecture Stanford CS 106EA	2/2025
Machine Learning in Economics Conference, University of Chicago	8/2024
Bravo/SNSF Workshop on Using Data to Make Decisions, Brown Univeristy	7/2024
Algorithmic Fairness Seminar, Stanford University	4/2024
Machine Learning Lunch, Stanford University	4/2024
Econometrics Lunch, Stanford University	4/2024

3. *Policy Learning under Biased Sample Selection.*

INFORMS Annual Meeting	10/2024
Interactive Causal Learning Conference	11/2023
Causal Data Science Meeting	11/2023
Econometrics Lunch, Stanford University	10/2023
Cornell Causal Reading Group, Cornell Tech	10/2023
Emma Brunskill Group Meeting, Stanford University	5/2023
Machine Learning Lunch, Stanford University	4/2023
Causal Inference Seminar, Stanford University	4/2023

4. *Learning from a Biased Sample*

BIRS Workshop on Bridging Prediction and Intervention Problems in Social Systems	6/2024
FDA Statistical Assessment Methodology and Diagnostic Biomarkers Meeting (SAMDB)	3/2024
Rising Stars in Data Science, University of Chicago	11/2023
ACM EAAMO	10/2023
INFORMS Annual Meeting	10/2023
Joint Statistical Meetings	8/2023
Data Science for Social Good Summer Program, Stanford University	8/2023
MIDAS Future Leaders Summit, University of Michigan	4/2023
Machine Learning Lunch, Stanford University	11/2022
Algorithmic Fairness Seminar, Stanford University	10/2022
Causal Inference Seminar, Stanford University	9/2022

5. *Policy Learning with Competing Agents.*

Causal Science Conference, Stanford University	11/2022
ACM EAAMO	10/2022
Algorithmic Fairness Seminar, Stanford University	4/2022
Causal Inference Seminar, Stanford University	4/2022
Machine Learning Lunch, Stanford University	3/2022

6. *Deep Orientation Uncertainty Learning based on a Bingham Loss.*

Schlumberger Robotics and Intelligent Automation Webinar	6/2020

Honors and Awards

Stanford DARE Fellowship ($54,800 support/2 years)	2024
Rising Star in Data Science, University of Chicago	2023
Future Leader in Data Science, University of Michigan	2023
Spectrum Population Health Sciences Pilot Grant Recipient ($12,000)	2023
Stanford Data Science Scholar Fellowship ($60,000 support/2 years)	2022
McCoy Family Center for Ethics in Society Graduate Fellowship	2021
NSF Graduate Research Fellowship	2020
Phi Beta Kappa Honor Society	2020
Angle Undergraduate Research and Innovation Scholar	2019
IEEE Eta Kappa Nu (HKN) Honor Society	2019
MIT Burchard Scholar	2018

Academic Service

Research Mentees

Amy Guan	9/2023 - Current
Melissa Liu	6/2023 - 9/2023

Outreach

Mentor, Stanford FAST (Future Advancers of Science and Technology)	9/2021 - 9/2023
Chair, Stanford Graduate Women in Computer Science	9/2022 - 9/2023
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

Course Assistant, CS 106EA (Exploring Artificial Intelligence), Stanford University	1/2025 - 3/2025
Course Assistant, CS 229 (Machine Learning), Stanford University	9/2024 - 12/2024
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 (2), Journal of the American Statistical Association (1), Journal of the Royal Statistical Society: Series B (1), Journal of Econometrics (1), Management Science (1), Operations Research (2), Quantitative Economics (1).
Conferences: FORC 2023, ACM FAccT (2023, 2024, 2025), NeurIPS 2023 (Conference), NeurIPS 2023 (Ethics), WiML (2023, 2024), ICLR (2024, 2025).

Committees

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