

# Roshni Sahoo

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## Education

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### Stanford University

9/2020 - Current

Candidate for PhD in 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

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1. Roshni Sahoo, Stefan Wager. Policy Learning with Competing Agents.

## Publications

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

## Workshops

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1. Policy Learning with Competing Agents.  
*Stanford-Berkeley Women in CS/EE Research Meetup 2022.*
2. Calibrating Predictions to Decisions: A Novel Approach to Multi-Class Calibration.  
*Spotlight at Distribution-Free Uncertainty Quantification Workshop, ICML 2021.*
3. Reliable Decisions with Threshold Calibration.  
*Distribution-Free Uncertainty Quantification Workshop Poster Session, ICML 2021.*
4. Tree Covers: An Alternative to Metric Embeddings.  
*Differential Geometry Meets Deep Learning Workshop Poster Session, NeurIPS 2020.*
5. Unsupervised Domain Adaptation in the Absence of Source Data.  
*Uncertainty and Robustness in Deep Learning Workshop Poster Session, ICML 2020.*
6. 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 Poster Session 2020.*
7. Running Sums and Stopping Times of Various Probability Distributions.  
*MAA Undergraduate Poster Session, Joint Mathematics Meetings 2016.*

## Talks

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1. Policy Learning with Competing Agents.  
*Stanford Algorithmic Fairness Lunch, April 2022.*  
*Stanford Machine Learning Lunch, March 2022.*  
*Stanford Causal Inference Seminar, April 2022.*
2. Deep Orientation Uncertainty Learning based on a Bingham Loss.  
*Schlumberger Robotics and Intelligent Automation Webinar 2020.*

## Honors and Awards

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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
Outstanding Poster Award, MAA Undergraduate Poster Session, JMM	2016
Siemens Research Competition National Semifinalist	2015

## Teaching

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<b>Instructor</b> , Inspirit AI, Stanford, CA	12/2020 - 4/2021
<b>Instructor</b> , Cambridge Math Circle, Cambridge, MA	3/2020 - 6/2020
<b>Teaching Assistant</b> , Introduction to Deep Learning, MIT	1/2020
<b>Tutoring Chair</b> , EECS Department, MIT	5/2019 - 5/2020
<b>Instructor</b> , Beautiful Patterns, Aguascalientes, Mexico.	5/2019
<b>HKN Tutor</b> , MIT	9/2018 - 6/2019
<b>Lab Assistant</b> , Elements of Software Construction, MIT	2/2018 - 6/2018
<b>Instructor</b> , Global Teaching Labs, Barcelona, Spain	1/2018 - 2/2018

## Outreach

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- Graduate Mentor**, Stanford FAST. 09/2021 - Current
- Data science mentor for a weekend program where local high school students work on open-ended research projects and present at an end-of-year science fair.
- Organizer**, Stanford Computing and Society. 12/2020 - Current
- Organizer of interdisciplinary group dedicated to bringing more discussions on societal and ethical implications of computing and CS research to the Stanford community.
  - In collaboration with 3 graduate students, received McCoy Family Center for Ethics in Society Small Grant to fund Ethics Roundtable Lunch, where researchers present and receive feedback on the ethical implications of their work.
- Graduate Mentor**, Stanford University. 9/2020 - 9/2021
- Mentoring undergraduate students in Stanford's CS Mentorship Program and First-Generation and/or Low-Income (FLI) Community Mentorship Program.
  - Providing feedback to students with underrepresented backgrounds on their applications to CS PhD programs in the Student-Applicant Support Program.

**Industry** 

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