Shuvom Sadhuka

Stata Center G574 • ssadhuka@mit.edu • shuvom-s.github.io

EDUCATION

Massachusetts Institute of Technology   Cambridge, MA
PhD candidate in Computer Science   2027 (expected)
Research Interests: AI and Decision-making, Privacy, Applications to Biomedicine

Massachusetts Institute of Technology   Cambridge, MA
SM in Computer Science   September 2023
Concentration: AI

Harvard University   Cambridge, MA
AB in Computer Science and Statistics   May 2022
Extracurriculars: Harvard College Bhangra, Harvard Crimson, Harvard College Consulting
Group, Harvard Sports Analytics Collective

PREPRINTS PUBLICATIONS (* co-first, ** co-last)

[w] = working paper (e.g., workshop paper) and/or under review, [p] = full publication

[w] S. Sadhuka, S. Lin, B. Berger**. E. Pierson**. *A Bayesian Model for Multi-stage Censoring*. **Spotlight presentation at** *ML4H 2024 (Findings Track)*; working paper

[w] D. Shanmugam*, S. Sadhuka*, M. Raghavan, J. Guttag, B. Berger, E. Pierson. *Evaluating Models with Labeled and Unlabeled Data*. ICLR Workshop on Data-Centric Machine Learning Research 2024; under review 2025

[w] S. Balachandar, S. Sadhuka, B. Berger, E. Pierson, N. Garg. *Using GNNs to Model Biased Crowdsourced Data for Urban Applications*. ICML Workshop on Humans, Algorithmic Decision-Making and Society 2024; under review 2025

[p] H. Cho, D. Froelicher*, N. Dokmai*, A. Nandi*, S. Sadhuka*, M. Hong*, B. Berger. *Privacy-Enhancing Technologies in Biomedical Data Science*. Annual Reviews in Biomedical Data Science 2024

[p] S. Sadhuka, D. Fridman, B. Berger, H. Cho. *Assessing transcriptomic reidentification risks using discriminative sequence models*. Genome Research 2023; **oral presentation at** *RECOMB 2023*

[p] H. Pirie, S. Sadhuka, J. Wang, R. Andrei, J. Hoffman. *Topological phononic logic*. **Cover article in** *Physical Review Letters* 2022
- *Press: Science Daily, Harvard SEAS, IEEE Spectrum, Hackaday*

[p] Q. Wang, D. Kelley, J. Ulrisch, M. Kanai, <u>S. Sadhuka</u>, R. Cui, C. Albors, N. Cheng, Y. Okada, Biobank Japan Project, F. Aguet, K. Ardlie, D. MacArthur, H. Finucane. *Leveraging supervised learning for functionally informed fine-mapping of cis-eQTLs identifies an additional 20,913 putative causal eQTLs. Nature Communications* 2021

TALKS & POSTERS

Machine Learning for Health Symposium. Vancouver, Canada [Talk]	2024
ACM Conference on Health, Inference, and Learning. New York, NY [Poster]	2024
Research in Computational Molecular Biology. Istanbul, Turkey [Talk]	2023
• *YouTube*	
American Society of Human Genetics Annual Meeting. Virtual [Talk]	2021
American Society of Human Genetics Annual Meeting. Virtual [Talk]	2020

SELECTED HONORS & AWARDS

MIT Envisioning the Future of Computing Essay, Honorable Mention	2023
National Science Foundation Graduate Research Fellowship	2022
Hertz Foundation Fellowship	2022

TEACHIING EXPERIENCE

Massachusetts Institute of Technology	Cambridge, MA
TA, 18.418: Topics in Computational Molecular Biology (Prof. Bonnie Berger)	Fall 2023

Harvard University	Cambridge, MA
TF, CS 124: Data Structures and Algorithms (Prof. Michael Mitzenmacher)	Spring 2021, 2022
• Derek Bok Award for Distinction in Teaching	
TF, MCB 112: Biological Data Analysis (Prof. Sean Eddy)	Fall 2020
TF, Stat 110: Introduction to Probability (Prof. Joe Blitzstein)	Fall 2019

REVIEWING AND SERVICE

Member, NIST AI Safety Institute Task Force on Red Teaming	2024
Planning Committee, Hertz Foundation Summer Workshop	2023

Reviewing: NeurIPS, ICLR, ICLR MLGenX workshop, Journal of Computational Biology, *PNAS*

LEADERSHIP & OUTREACH

Mentor Training Chair, MIT EECS Graduate Application Assistance Program.	2024-present
• Mentor, 2022-present	
Tutor, Research Science Institute	Summer 2023, 2024
Non-Resident Tutor, Mather House (Harvard University)	2022-2023
Co-captain, Harvard College Bhangra	2020-2022

MENTORSHIP

Ragulan Sivakumar (MEng student)	Fall 2024-present
Sophia Lin (RSI summer student)	Summer 2024-present

INDUSTRIAL EXPERIENCE

Genentech   San Francisco, CA
ML Research Intern   2025

BBN Technologies   Cambridge, MA
Software Intern, Machine Translation Division   2020

REFERENCES

Bonnie Berger
Massachusetts Institute of Technology
Simons Professor of Mathematics and of Computer Science
bab@csail.mit.edu

Emma Pierson
University of California, Berkeley
Assistant Professor of Electrical Engineering and Computer Science
emma.pierson@berkeley.edu

Hyunghoon Cho
Yale University
Assistant Professor of Biomedical Informatics and Data Science
hhcho@broadinstitute.org