Shuvom Sadhuka

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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)

[w] = working paper and/or under review, [p] = full publication

[w] S. Sadhuka, D. Prinster, C. Fannjiang, G. Scalia, B. Berger, A. Regev, H. Wang. *E-valuator: Validating Agent Trajectories with Sequential Hypothesis Testing*. Working paper (draft available upon request)

[p] S. Balachandar, S. Sadhuka, B. Berger, E. Pierson, N. Garg. *Using GNNs to Model Biased Crowdsourced Data for Urban Applications*. AAAI 2026

[p] D. Shanmugam*, S. Sadhuka*, M. Raghavan, J. Guttag, B. Berger, E. Pierson. *Estimating Classifier Performance with Limited Labels*. NeurIPS 2025

[p] S. Sadhuka, S. Lin, B. Berger**. E. Pierson**. *A Bayesian Model for Multi-stage Censoring*. ML4H 2025 (proceedings track), also **spotlight presentation at** ML4H 2024 (findings track)

[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

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

Roundtable Chair, ML4H 2024	2024
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-Spring 2025
Sophia Lin (RSI summer student)	Summer 2024-Fall 2024

INDUSTRIAL EXPERIENCE

Genentech   San Francisco, CA
ML Research Intern   2025
Working on statistical methods for monitoring scientific LLM agents.

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