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
Fellowships: Hertz Fellowship, NSF GRFP

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, A. Regev, H. Wang. *E-valuator: Reliable Agent Verifiers with Sequential Hypothesis Testing*. Preprint (arxiv)

[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. *Evaluating multiple models using labeled and unlabeled data*. 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, S. Sadhuka, 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

TALKS & PRESENTATIONS

E-valuator: Reliable Agent Verifiers with Sequential Hypothesis Testing
Rational Intelligence Seminar Series [YouTube] 2026
MIT, Algorithms Coffee 2026

Evaluating multiple models using labeled and unlabeled data
MIT, Machine Learning Tea 2025

Assessing transcriptomic reidentification risks
RECOMB, Oral Presentation [YouTube] 2024

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
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, 2025 2024, 2025
Member, NIST AI Safety Institute Task Force on Red Teaming 2024
Planning Committee, Hertz Foundation Summer Workshop 2023
Reviewing: NeurIPS, ICML, ICLR, 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

Abridge New York, NY
PhD Research Intern 2026
Mentors: Alex Chouldechova, Michael Oberst

Genentech San Francisco, CA
ML Research Intern 2025
Mentors: Hanchen Wang, Aviv Regev
Worked 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

Aviv Regev
Genentech
Executive Vice President of Research and Early Development
regev-letters-d@gene.com

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