

HAMMAAD ADAM

hadam@mit.edu | <https://hammaadadam1.github.io>

RESEARCH AREAS

Machine Learning, Causal Inference, Clinical Trials and A/B Testing, Applied Econometrics, Healthcare Disparities, Healthcare Operations

EDUCATION

Massachusetts Institute of Technology, Cambridge, MA Aug 2020-Present

- PhD student in Social and Engineering Systems and Statistics; GPA: 4.0/4.0
- Department: Institute for Data, Systems, and Society (IDSS)
- Advisors: Profs. Marzyeh Ghassemi and Nikhil Agarwal
- Coursework: machine learning, probability theory, mathematical statistics, causal inference, natural language processing, market design, econometrics

Columbia University, New York, NY Aug 2018-Dec 2019

- Master of Science in Data Science, GPA: 4.1/4.0
- Coursework: machine learning, Bayesian statistics, probabilistic models, algorithms

Yale University, New Haven, CT Aug 2012-May 2016

- Bachelor of Science in Applied Mathematics; GPA: 3.9/4.0, magna cum laude

WORK EXPERIENCE

Research Intern, Microsoft Research, Cambridge, MA May 2022-Aug 2022

- Assessed the fairness implications of early stopping rules in sequential A/B testing and clinical trials with heterogeneous populations
- Mentors: Allison Koenecke, Lester Mackey, Lorin Crawford, Neil Tenenholz, Fan Yin

Senior Analyst, Altman Vilandrie & Company, Boston, MA Sep 2016-May 2018

- Provided strategy consulting and M&A advisory for telecom, media, and technology firms
- Led data analysis, financial modeling, and client presentations on a variety of projects

PUBLICATIONS

1. **Adam, Hammaad**, Fan Yin, Mary Hu, Neil Tenenholz, Lorin Crawford, Lester Mackey, and Allison Koenecke. "Should I Stop or Should I Go: Early Stopping with Heterogeneous Populations." *NeurIPS*, 2023.
→ *NeurIPS Spotlight Presentation* (top ~5% of submissions)
→ *Presented at: INFORMS 2023, IC2S2 2023 (parallel talk), CoDE @ MIT 2022 (parallel talk)*
2. **Adam, Hammaad**, Pu He, and Fanyin Zheng. "Machine learning for demand estimation in long tail markets." *Management Science* (forthcoming).
→ *Presented at: INFORMS (2020, 2021)*
3. **Adam, Hammaad**, Aparna Balagopalan, Emily Alsentzer, Fotini Christia, and Marzyeh Ghassemi. "Mitigating the impact of biased artificial intelligence in emergency decision-making." *Communications Medicine* 2, no. 1 (2022): 149.
→ *Presented at: NeurIPS Workshop on Trustworthy, Safe, and Reliable ML (2022)*
→ *Media coverage: MIT News*

4. **Adam, Hammaad**, Ming Ying Yang, Kenrick Cato, Ioana Baldini, Charles Senteio, Leo Anthony Celi, Jiaming Zeng, Moninder Singh, and Marzyeh Ghassemi. "Write it like you see it: Detectable differences in clinical notes by race lead to differential model recommendations." In *Proceedings of the 2022 AAAI/ACM Conference on AI, Ethics, and Society (AIES'22)*, pp. 7-21. 2022.

→ *Presented at: AIES (lighting talk), SickKids Bioethics Week (2022)*

→ *Media coverage: STAT, MIT News*

5. Rube, H. Tomas, Chaitanya Rastogi, Siqian Feng, Judith F. Kribelbauer, Allyson Li, Basheer Becerra, Lucas AN Melo Bach Viet Do, Xiaoting Li, **Hammaad Adam**, Neel H. Shah, Richard S. Mann & Harmen J. Bussemaker. "Prediction of protein–ligand binding affinity from sequencing data with interpretable machine learning." *Nature biotechnology* 40, no. 10 (2022): 1520-1527.

HONORS AND AWARDS

MIT Racism Research Fund Grant (with PI: Dr. Marzyeh Ghassemi), 2023

MIT Jameel Clinic Grant (with PI: Dr. Marzyeh Ghassemi), 2021

MIT IBM Watson AI Lab Grant (with PI: Dr. Marzyeh Ghassemi), 2021

MIT Bose Fellowship, 2020

SERVICE

Reviewing

- *Journals*: Management Science, Journal of Racial and Ethnic Health Disparities, Nature Scientific Data
- *Conferences / Workshops*: FAccT (2023), CHIL (2023), Machine Learning for Health (2022)

Mentorship

- MIT Undergraduate Research Opportunities Program (Ming Ying Yang, Srinidhi Narayanan)
- Try AI Micro-Internship Program for early college students, 2023.

SKILLS AND INTERESTS

- R, Python (including pandas, sklearn and PyTorch), Stan, SQL, Java, MATLAB
- Avid skier, novice curler, retired rugby player
- Former college classic rock radio show host