Emma Harvey

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RESEARCH INTERESTS

Practical, interdisciplinary methods for assessing and improving the fairness of sociotechnical systems

EDUCATION

Cornell University

Aug. 2023 - present

PhD student in Information Science

Committee: Allison Koenecke (co-chair), Rene Kizilcec (co-chair), Karen Levy, Nikhil Garg

University of Pennsylvania

Aug. 2013 - Dec. 2017

BA in Computer Science and Philosophy, Politics, & Economics

Honors and Awards

Best Paper Honorable Mention, ACM CHI for [P2] $(top\ 5\%)$ 2024 Honorable Mention, National Science Foundation Graduate Research Fellowship (NSF GRFP) 2024 Summa Cum Laude, University of Pennsylvania $(GPA\ 3.84\ /\ 4.00)$ 2017

RESEARCH

Conference and Journal Publications stringently peer-reviewed

- P4. Jinsook Lee*, **Emma Harvey***, Joyce Zhou, Nikhil Garg, Thorsten Joachims, and Rene Kizilcec. Ending Affirmative Action Harms Diversity Without Improving Academic Merit. 2024. Forthcoming at the ACM Conference on Equity and Access in Algorithms, Mechanisms, and Optimization (EAAMO'24). pdf.
- P3. Emma Harvey, Michelle Seng Ah Lee, and Jatinder Singh. *Improving Group Fairness Assessments with Proxies*. 2024. ACM Journal on Responsible Computing (ACM JRC). pdf.
- P2. Emma Harvey, Hauke Sandhaus, Abigail Z. Jacobs*, Emanuel Moss*, and Mona Sloane*. 2024. The Cadaver in the Machine: The Social Practices of Measurement and Validation in Motion Capture Technology. ACM CHI Conference on Human Factors in Computing Systems (CHI'24). pdf. Best Paper Honorable Mention.
- P1. Sasha Costanza-Chock, **Emma Harvey**, Inioluwa Deborah Raji, Martha Czernuszenko, and Joy Buolamwini. 2022. Who Audits the Auditors? Recommendations from a field scan of the algorithmic auditing ecosystem. ACM Conference on Fairness, Accountability, and Transparency (FAccT'22). pdf.

Workshop Publications and Presentations lightly peer-reviewed

- W4. Emma Harvey, Allison Koenecke, and Rene Kizilcec. Towards an Educator-Centered Method for Measuring Bias in Large Language Models. AAAI 2024 Workshop on AI for Education. presentation. pdf. Spotlight Presentation.
- W3. Elena Gray, **Emma Harvey**, Kevin Coltin, and Greg Szwartz. 2022. Creating a Covid-19 risk decision metric with an agent-based simulation model. In 2022 American Public Health Association Annual Meeting and Expo (APHA'22). abstract.

 $^{*\} denotes\ equal\ contribution$

¹Due a request from my former employer, my name is not on the version of record. The authors' version is available on arXiv.

- W2. Rhodri Dierst-Davies, Sarah Godby Vail, Sarah Ayton, Greg Lidrbauch, Jennifer Vargas, Nik Andric, Emma Harvey, Greg Szwartz, Miguel Garza, Javier Lozano, Alexandro Arias, Paulina Sosa, Paola Martinez and Jose Reyes. 2019. A Mixed-Methods Approach Integrating Behavioral Insights and Data Analytics to Address Retention at Diabetes Clinics in Mexico: A Guide for Program Development. In 2019 American Public Health Association Annual Meeting and Expo (APHA'19). abstract.
- W1. Emma Harvey, Nik Andric, Rhodri Dierst-Davies, Sarah Godby Vail, Greg Szwartz, Alexandro Arias, Kevin Coltin, Javier Lozano, Miguel Garza, Sarah Ayton, Greg Lidrbauch, Jose Reyes, Paulina Sosa, and Paola Martinez. Pathway Analysis for Care Adherence Modeling. In 2019 American Public Health Association Annual Meeting and Expo (APHA'19). abstract.

WORK EXPERIENCE

New York University

Mar. 2023 - present

Research Assistant, Expanding AI Audits

Auditing the assumptions upon which motion capture systems are based under the supervision of Abigail Jacobs, Emanuel Moss, and Mona Sloane

Microsoft Research May 2024 - Aug. 2024

Research Intern, Fairness, Accountability, Transparency, Ethics in AI (FATE)

Conducted an interview study to understand and bridge the gaps between research and practice in measuring representational harms from large language models under the supervision of Emily Sheng, Su Lin Blodgett, Alex Chouldechova, Jean Garcia-Gathright, Alexandra Olteanu, and Hanna Wallach

University of Cambridge

Jul. 2021 - Aug. 2024

Research Assistant, Compliant and Accountable Systems

Explored practical methods for conducting fairness assessments of decision-making algorithms without access to demographic data under the supervision of Jatinder Singh

Deloitte Consulting

Feb. 2018 - Aug. 2023

Data Scientist, AI & Advanced Analytics

Created Deloitte's first ethical AI toolkit to detect bias in decision-making systems; used to audit algorithms in education, healthcare, and hiring

Talks and Presentations

Assumptions in Motion Capture Technology

– CHI'24. Proceedings Talk. May 2024.

Harms from Large Language Models

- Microsoft Research. Internal Talk. August 2024.
- AAAI'24 Workshop on AI4ED. Spotlight Presentation. February 2024.

Risk Models for Covid-19 Decision-Making

- APHA'22. Proceedings Talk. November 2022.
- Carnegie Mellon University (CMU). Guest Lecture in Communicating Covid: Using Data & Visualizations to Build Trust and Cause Action (94-892). 2021.

Adherence to Medical Care

- CMU. Guest Lecture in Designing Smart and Healthy Systems (90-835). 2019, 2020.

TEACHING

Cornell University

Teaching Assistant, Introduction to Data Science, Prof. Allison Koenecke Aug. 2024 - Jan. 2025

University of California San Diego

Co-Instructor, Responsible AI Data Science Capstone, Prof. David Danks Aug. 2022 - Mar. 2023

University of Pennsylvania

Teaching Assistant, Penn in Washington, Prof. Deirdre Martinez May 2014 - Dec. 2017

SERVICE

Community

Cornell Information Science Graduate Student Association

Sep. 2024 - present

Admissions Representative

Elected to serve as the Admissions Representative on Cornell's ISGSA. Organize the Student-Applicant Reading Program (SARP), in which current information science PhD students provide support to prospective PhD applicants in order to broaden participation in higher education.

Algorithmic Justice League

Sep. 2020 - Aug. 2023

Researcher

Led a team of research consultants providing pro bono support to the Algorithmic Justice League (AJL) to understand the algorithm auditing industry via interviews and a survey of practitioners and researchers.

Academic

Scheduling Co-Chair, ACM FAccT

2024

Reviewing: NeurIPS (Ethics Review, 2024; EvalEval Workshop, 2024), ACM FAccT (2024)