Emma Harvey

✉ evh29@cornell.edu | 🌐 emmaharv.github.io | ⦿ emmaharv | in emmharv

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

Advisors: Allison Koenecke and Rene Kizilcec

University of Pennsylvania   *Aug. 2013 - Dec. 2017*

BA in Computer Science and Philosophy, Politics, & Economics

RESEARCH

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

University of Cambridge   *Jul. 2021 - present*

Research Assistant, Compliant and Accountable Systems

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

The Algorithmic Justice League   *Sep. 2020 - Jun. 2023*

Pro Bono Research Consultant

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

PUBLICATIONS

Conference Proceedings

Emma Harvey, Hauke Sandhaus, Abigail Jacobs, Emanuel Moss, and Mona Sloane. *The Cadaver in the Machine: The Social Practices of Measurement and Validation in Motion Capture Technology.* Forthcoming at the 2024 ACM CHI Conference on Human Factors in Computing Systems (CHI '24). arXiv.

Sasha Costanza-Chock, **Emma Harvey**,[1] Inioluwa Deborah Raji, Martha Czernuszenko, and Joy Buolamwini. 2022. *Who Audits the Auditors? Recommendations from a field scan of the algorithmic auditing ecosystem.* In 2022 ACM Conference on Fairness, Accountability, and Transparency (FAccT '22). Association for Computing Machinery, New York, NY, USA, 1571–1583. doi.org/10.1145/3531146.3533213.

Non-Archival Papers and Presentations

Emma Harvey, Allison Keonecke, and Rene Kizilcec. *Towards an Educator-Centered Method for Measuring Bias in Large Language Models.* Forthcoming at the AAAI 2024 Workshop on AI for Education.

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.

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

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

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.

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.

Working Papers

Emma Harvey, Michelle Seng Ah Lee, and Jatinder Singh. *Assessing Fairness without Access to Demographic Data.* 2023. Under review.

Teaching

University of California San Diego *Aug. 2022 - Mar. 2023*

Capstone Mentor, Data Science

– Co-developed a Responsible AI section with David Danks for the Halicioğlu Data Science Institute's undergraduate capstone course

Carnegie Mellon University *Sep. 2019 - Dec. 2021*

Guest Lecturer, Integrated Innovation Institute

– Contributed to development of and guest-lectured for the 'Designing Smart and Healthy Systems' mini course taught by David Steier

University of Pennsylvania *May 2014 - Dec. 2017*

Teaching & Programming Assistant, Penn in Washington

– Helped plan, develop, and TA courses taught by the Penn in Washington program in Philadelphia and DC

Industry

Deloitte Consulting *Feb. 2018 - Aug. 2023*

Data Scientist, AI & Advanced Analytics

– Created Deloitte's first ethical AI toolkit, including a framework and codebase, to detect bias in decision-making systems; used to audit a variety of algorithms in fields including education, healthcare, and hiring

Service

Academic

Program Committee Member, ACM FAccT	2024
Student Volunteer, ACM FAccT	2022

Community

Student Reviewer and Interviewer, Cornell Information Science PhD Admissions	2024
Mentor, Cornell IS Student-Applicant Reading Program (SARP)	2023

Honors and Awards

Summa Cum Laude, University of Pennsylvania (GPA 3.84 / 4.00)	2017