

EMILY BLACK

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EDUCATION

Carnegie Mellon University

PhD Candidate in Computer Science
Advisor: Matt Fredrikson

July 2018 - Present

Wesleyan University

B.A. Triple Major: Math, Computer Science, and English
Honors in Computer Science
Thesis Advisor: Dan Licata

September 2013 - May 2017

RESEARCH EXPERIENCE

Computer Science PhD Candidate, Carnegie Mellon University

Advisor: Matt Fredrikson, Project Advisor: Alexandra Chouldechova

July 2018 - Present

- Working on MacArthur-funded project to evaluate racial disparities in recidivism prediction models with Professors Alexandra Chouldechova and Kristian Lum
- Working on displaying the inconsistency of explanations in deep models rising from their instability

Research Fellow, RegLab, Stanford Law School

Advisor: Daniel Ho

June 2020 - Present

- Currently collaborating with the IRS to evaluate biases in auditing systems
- Lead project on facial recognition policy white paper

Research Intern, Microsoft Research

Advisor: Solon Barocas

June 2021 - August 2021

- Leading project on connecting ramifications of model multiplicity to legal and policy concerns surrounding the use of machine learning systems in sensitive contexts

PUBLICATIONS

Leave-One-Out Unfairness (FAccT 2021)

Emily Black, Matt Fredrikson

FlipTest: Fairness Testing via Optimal Transport (FAT* 2020)

Emily Black, Samuel Yeom, Matt Fredrikson

Feature-Wise Bias Amplification (ICLR 2019)

Klas Leino, Emily Black, Matt Fredrikson, Shayak Sen, Anupam Datta

Evaluating Facial Recognition Technology: A Protocol for Performance Assessment in New Domains (Under Submission)

Daniel E. Ho, Emily Black, Maneesh Agrawala, Li Fei-Fei

A Call for Universities to Develop Requirements for Community Engagement in AI Research (Workshop at CHI 2020)

Emily Black, Joshua Williams, Michael Madaio, Priya Donti

Towards a Verification of Courcelle's Theorem (WesScholar 2017 Undergraduate Honors Thesis)

Emily Black

56 Molecular dynamics simulation studies of protein sectors: motional correlations (*Journal of Biomolecular Structure and Dynamics* 2015)

Bharat Lakhani, Emily Black, David L. Beveridge

TEACHING

Institute for Software Research, Carnegie Mellon University Starting September 2020
Ethics and Policy Issues in Computing Teaching Assistant

Machine Learning Dept., Carnegie Mellon University January 2020-May 2020
Intro to ML (PhD) Teaching Assistant

OurCS 2019, Carnegie Mellon University October 2019
Auditing Algorithms for Bias Workshop Team co-Leader

Mathematics Department, Wesleyan University September 2016 - December 2016
Discrete Mathematics Teaching Assistant

WORKSHOPS

Summer Institute on AI and Society, AMII/CIFAR July 2019
Worked with legal scholars, philosophers and education experts to create a response to the EU's Guidelines for Trustworthy AI

SERVICE

Computer Science Department Graduate Student Assembly Representative 2018-Present

SELECTED AWARDS

Honorable Mention for the Goldwater Scholarship 2016

Annie Sonnenblick Writing Award 2016

Grant given to 2 students per year at Wesleyan University to write a creative nonfiction piece