Keegan W. Harris

Curriculum Vitae – August 2023

Email: keeganh@cs.cmu.edu Website: keeganharris.github.io

EDUCATION

Carnegie Mellon University

Machine Learning Ph.D. Student Master of Science - Machine Learning

Advisors: Nina Balcan and Steven Wu The Pennsylvania State University

Bachelor of Science - Computer Science (Mathematics minor)

Bachelor of Science - Physics Graduated summa cum laude State College, PA May 2019

May 2019

Pittsburgh, PA August 2020 - Present

December 2022

EMPLOYMENT

Microsoft Research Lab - New England

Cambridge, MA May 2023 - August 2023 Research Intern

Mentors: Nicole Immorlica, Brendan Lucier, and Alex Slivkins

Summer research intern with the Economics and Computation group.

Vitable Health (YC S20)

Philadelphia, PA January 2022 - June 2022

Machine Learning Consultant Explored the integration of machine learning systems into their existing technology stack.

Publications

Conference Proceedings:

- 1. Keegan Harris*, Ioannis Anagnostides*, Gabriele Farina, Mikhail Khodak, Zhiwei Steven Wu, and Tuomas Sandholm. Meta-Learning in Games. International Conference on Learning Representations (ICLR), 2023.
- 2. Keegan Harris, Valerie Chen, Joon Sik Kim, Ameet Talwalkar, Hoda Heidari, and Zhiwei Steven Wu. Bayesian Persuasion for Algorithmic Recourse. Neural Information Processing Systems (NeurIPS), 2022.
- 3. Keegan Harris, Daniel Ngo*, Logan Stapleton*, Hoda Heidari, and Zhiwei Steven Wu. Strategic Instrumental Variable Regression: Recovering Causal Relationships From Strategic Responses. International Conference on Machine Learning (ICML), 2022.
- 4. Keegan Harris, Hoda Heidari, and Zhiwei Steven Wu. Stateful Strategic Regression. Neural Information Processing Systems (NeurIPS), 2021.

Preprints:

- 1. Anish Agarwal*, Keegan Harris*, Justin Whitehouse*, and Zhiwei Steven Wu*. Adaptive Principal Component Regression with Applications to Panel Data. https://arxiv.org/abs/2307.01357
- 2. Mikhail Khodak*, Ilya Osadchiy*, Keegan Harris, Maria-Florina Balcan, Kfir Levy, Ron Mier, and Zhiwei Steven Wu. Meta-Learning Adversarial Bandit Algorithms. https://arxiv.org/abs/2307.02295
- 3. Keegan Harris, Chara Podimata, and Zhiwei Steven Wu. Strategic Apple Tasting. https://arxiv.org/abs/2306.06250
- 4. Keegan Harris, Anish Agarwal, Chara Podimata, and Zhiwei Steven Wu. Strategyproof Decision-Making in Panel Data Settings and Beyond. https://arxiv.org/abs/2211.14236

Awards and Honors

NDSEG Fellowship April 2022

Graduate fellowship funded by the United States Department of Defense

Evan Pugh Senior Scholar Award

May 2019

Awarded to senior Penn State students in the top 0.5% of GPA

Phi Beta Kappa April 2018

Penn State chapter, inducted as a junior

^{*}Denotes equal contribution and/or alphabetical ordering

Talks

1. "Algorithmic Decision-Making using Panel Data"

Microsoft Research ML Ideas Seminar (August 2023)

2. "Strategyproof Decision-Making in Panel Data Settings and Beyond"

Online Causal Inference Seminar (May 2023)

Carnegie Mellon University, FEAT Reading Group (November 2022)

- 3. "Algorithmic Decision-Making Under Incentives: Apple Tasting Feedback and Multiclass Learnability" Simons TOC For Fairness Seminar (May 2023)
- 4. "Bayesian Persuasion for Algorithmic Recourse"

Tübingen University, Setareh Maghsudi's Group Meeting (February 2023)

3rd Symposium on the Foundations of Responsible Computing (June 2022)

AAMAS 2022, Learning with Strategic Agents Workshop (May 2022, Oral Presentation)

NeurIPS 2021, Workshop on Human and Machine Decisions (December 2021, Oral Presentation

- 6% acceptance rate)
- 5. "Strategic Instrumental Variable Regression: Recovering Causal Relationships From Strategic Responses"

ICML 2022, Spotlight (July 2022, Short Talk)
AAMAS 2022, Learning with Strategic Agents Workshop (May 2022, **Oral Presentation**)

ICML 2021, Workshop on Algorithmic Recourse (July 2021, Spotlight Presentation)

6. "Decision Making Under Strategic Responses"

Carnegie Mellon University, FATES Summer Series (August 2021)

7. "Stateful Strategic Regression"

2nd Symposium on the Foundations of Responsible Computing (June 2021)

Carnegie Mellon University, FEAT Reading Group (March 2021)

SERVICE

EXTERNAL REVIEWER:

- ACM Conference on Economics & Computation (EC) 2022
- Conference on Neural Information Processing Systems (NeurIPS) 2021
- Innovations in Theoretical Computer Science (ITCS) 2022
- Symposium on Discrete Algorithms (SODA) 2022

PROGRAM COMMITTEE:

- Conference on Artificial Intelligence and Statistics (AISTATS) 2024, 2023 (Top 10% Reviewer)
- Conference on Neural Information Processing Systems (NeurIPS) 2023, 2022
- International Conference on Machine Learning (ICML) 2023, 2022

SIGECOM:

- SIGecom Seminar Series Co-organizer 2022

University Service:

- CMU Machine Learning Ph.D. Admissions Committee 2023, 2022
- CMU SCS Graduate Application Support Program 2022, 2020
- CMU Undergraduate AI Mentoring Program 2023, 2022, 2021

Workshop Program Committee:

- Formal Verification of Machine Learning (ICML 2023)
- Learning and Decision Making with Strategic Feedback (NeurIPS 2021)
- Learning in Presence of Strategic Behavior (NeurIPS 2021)
- Trustworthy and Socially Responsible Machine Learning (NeurIPS 2022)

Teaching

- Teaching Assistant: Advanced Topics in Machine Learning Theory (Fall 2022). Instructor: Nina Balcan