Keegan W. Harris

Curriculum Vitae – June 2023

Website: keeganharris.github.io
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Education

Carnegie Mellon University — Pittsburgh, PA
Machine Learning Ph.D. Student — *August 2020 - Present*
Master of Science - Machine Learning — *December 2022*
Advisors: Nina Balcan and Steven Wu

The Pennsylvania State University — State College, PA
Bachelor of Science - Computer Science (Mathematics minor) — *May 2019*
Bachelor of Science - Physics — *May 2019*
Graduated *summa cum laude*

Employment

Microsoft Research Lab - New England — Boston, MA
Research Intern — *May 2023 - Present*
Student researcher with the Economics and Computation group. Host: Alex Slivkins

Vitable Health — Philadelphia, PA
Machine Learning Consultant — *January 2022 - June 2022*
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. Maria-Florina Balcan, **Keegan Harris**, Mikhail Khodak, and Zhiwei Steven Wu. *Meta-Learning Adversarial Bandits.* https://arxiv.org/abs/2205.14128
2. **Keegan Harris**, Chara Podimata, and Zhiwei Steven Wu. *Strategic Apple Tasting.* https://arxiv.org/abs/2306.06250
3. **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

Workshop Papers:

1. **Keegan Harris**, Chara Podimata, and Zhiwei Steven Wu. *Strategy-Aware Contextual Bandits.* NeurIPS 2022 Workshop on Distribution Shifts.

Awards and Honors

AISTATS Top Reviewer — *February 2023*
Awarded to top 10% of AISTATS 2023 reviewers

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. "*Strategyproof Decision-Making in Panel Data Settings and Beyond*"
   Online Causal Inference Seminar (May 2023)
   Carnegie Mellon University, FEAT Reading Group (November 2022)

2. "*Algorithmic Decision-Making Under Incentives: Apple Tasting Feedback and Multiclass Learnability*"
   Simons TOC For Fairness Seminar (May 2023)

3. "*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**)

4. "*Allocating Opportunities in a Dynamic Model of Intergenerational Mobility*"
   IJCAI 2022, Best Papers from Sister Conferences Track (July 2022, talk given on behalf of Hoda Heidari and Jon Kleinberg)

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) 2023
- 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

Graduate Coursework

- Advanced Algorithms (Spring 2023). Instructor: Anupam Gupta
- Advanced Introduction to Machine Learning (Fall 2020). Instructor: Nihar Shah
- Advanced Machine Learning (Spring 2021). Instructor: Pradeep Ravikumar
- Advanced Statistical Theory (Spring 2022). Instructor: Siva Balakrishnan
- Advanced Statistical Theory II (Fall 2021). Instructor: Alessandro Rinaldo
- Advanced Topics in Machine Learning and Game Theory (Fall 2020). Instructor: Fei Fang
- Applications of High-Dimensional Statistics (Spring 2023, mini course). Instructor: Andrew Li
- Computational Game Solving (Fall 2021). Instructor: Gabriele Farina and Tuomas Sandholm
- Convex Analysis (Spring 2023, mini course). Instructor: Javier Peña
- Economics of Information (Spring 2022, mini course). Instructor: James Best
- Foundations of Causal Inference (Fall 2022, mini course). Instructor: Edward Kennedy
- Graduate Algorithms (Spring 2021). Instructor: Anupam Gupta
- Intermediate Statistics (Fall 2021). Instructor: Siva Balakrishnan
- Machine Learning in Practice (Fall 2022). Instructor: Rayid Ghani
- Modern Causal Inference (Fall 2022, mini course). Instructor: Edward Kennedy
- Modern Convex Optimization (Spring 2022, mini course). Instructor: Javier Peña