Aviva Prins

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Education

University of Maryland, College Park   College Park, MD
Ph.D. candidate in Computer Science   2019–Present

- *Advised by:* John P. Dickerson and Aravind Srinivasan
- *Research areas:* sequential and combinatorial decision-making under uncertainty (multi-armed bandits, multi-agent reinforcement learning); algorithmic fairness; mathematical modeling

University of Maryland, College Park   College Park, MD
M.S. in Computer Science; specialization in Artificial Intelligence   2019–2021

- *Selected coursework:* Algorithms in Machine Learning: Guarantees and Analyses, Applied Mechanism Design, Advanced Numerical Optimization, Scientific Computing
- *GPA:* 3.94

University of California, Los Angeles (UCLA)   Los Angeles, CA
B.S. in Applied Mathematics; specialization in Computing   2016–2019

- *Selected coursework:* Machine Learning, Optimization, Mathematical Modeling, Game Theory, Algorithms, Probability Theory
- *GPA:* 3.87

Santa Monica College   Santa Monica, CA
A.S. in Mathematics   2016–2019

- *GPA:* 3.77

Experience

Oracle Inc.   Remote
Data Science Intern, Retail team   06/2022–08/2022
Advised by: Debdatta Sinha Roy and Sajith Vijayan | Streaming algorithm development for retail forecasts.

Harvard University   Remote
Center for Research on Computation and Society (CRCS) Summer Fellow   06/2020–08/2020
Advised by: Milind Tambe and Rediet Abebe | Algorithmic fairness in restless multi-armed bandits.

Google LA & Institute for Pure and Applied Math (IPAM), UCLA   Los Angeles, CA
Research in Industrial Projects for Students (RIPS) Fellow   06/2019–08/2019
Advised by: Vardan Akopian and Scott Schneider | Probabilistic privacy assurance in Google's Ads Data Hub.

UCLA   Los Angeles, CA
Student Researcher   03/2018–06/2019
Advised by: Andrea L. Bertozzi | Reinforcement learning of dynamical systems for a municipal gang prevention program.

UCLA   Los Angeles, CA
Student Researcher   03/2018–03/2019
Advised by: Mason A. Porter | Quantitative analysis of an ensemble of large networks, each with $\sim 10^3$ nodes and $\sim 10^5$ edges.

UCLA   Los Angeles, CA
Student Researcher   06/2016–08/2017
Advised by: Andrea L. Bertozzi | Numerical solutions to partial differential equations describing particle-laden flows.

Technical Skills

Proficient: Python, SQL, MATLAB, LaTeX | **Familiar:** R, C++

Libraries & tools: scikit-learn, pandas, NumPy, Scipy, NetworkX, Gurobi

Conference and Journal Papers

[1] C. Herlihy*, **A. Prins***, A. Srinivasan, and J. Dickerson, "Planning to Fairly Allocate: Probabilistic Fairness in the Restless Bandit Setting", in *ACM SIGKDD Conference on Knowledge Discovery and Data Mining*, (to appear), 2023. Available: https://arxiv.org/abs/2106.07677.

[2] D. Dominic*, J. Bojorquez*, J. Crasto*, M. Koulikova*, T. Latib*, **A. Prins***, A. Shapiro*, C. Ye*, D. Arnold, C. Falcon, and A. Bertozzi, "Investigation of Constant Volume and Constant Flux Initial Conditions on Bidensity Particle-Laden Slurries on an Incline", *American Journal of Undergraduate Research* 16.3: 42-57, 2019.

Workshop Papers and Extended Abstracts

[1] C. Herlihy*, **A. Prins***, A. Srinivasan, and J. Dickerson, *Planning to Fairly Allocate: Probabilistic Fairness in the Restless Bandit Setting*, Responsible Decision Making in Dynamic Environments Workshop, ICML, 2022.

[2] **A. Prins**, C. Herlihy, and J. Dickerson, *What Should I Grow Today so I Make Money Tomorrow? Supporting Small Farmers' Crop Planning with Social, Environmental, and Market Data*, Practical ML for Developing Countries Workshop, ICLR, 2022.

[3] **A. Prins**, A. Mate, J. Killian, R. Abebe, and M. Tambe, *Incorporating Healthcare Motivated Constraints in Restless Bandit Based Resource Allocation,*, Challenges of Real World Reinforcement Learning, Machine Learning in Public Health (Best Lightning Paper), Machine Learning for Health (Best on Theme), Machine Learning for the Developing World, NeurIPS, 2020.

[4] J. Bojorquez*, A. Busis*, **A. Prins***, A. Shapiro*, Q. Zhu*, X. Zuo*, C. Falcon, and A. Bertozzi, *Experimental and Theoretical Investigation of Constant Flux Bidensity Particle Laden Flows on an Incline*, APS March Meeting Abstracts, 2018.

Teaching Experience

University of Maryland, College Park   College Park, MD
Teaching Assistant   06/2019–05/2020

- Introduction to Data Science (CMSC 320), Fall 2019 and Fall 2020
- Introduction to Artificial Intelligence (CMSC 421), Spring 2020

Service

PC member	AI for Social Good workshop (held at AAAI)	2023
	Equity and Access in Algorithms, Mechanisms, and Optimization (EAAMO)	2022
Reviewer	Conference on Neural Information Processing Systems (NeurIPS)	2022–2023
	International Conference on Machine Learning (ICML)	2022
	Artificial Intelligence and Statistics (AISTATS)	2021
	Machine Learning for Health Symposium (ML4H)	2021–2022
	Cooperative AI NeurIPS Workshop	2020
Co-organizer	Multi-agent Reinforcement Learning Reading Group	2023
	Pasteur's Quadrant Seminar Series	2021–2022
Board member	Graduate Student Seating Committee	
	Director of UMIACS Review Committee	