

# ANNA L. TRELLA

annatrella@g.harvard.edu

annatrella.github.io

INTERESTS	Theoretical and applied aspects of online reinforcement learning and Bayesian machine learning
EDUCATION	<b>Ph.D. Computer Science, Harvard University</b>  2020 - Present  GPA 4.0. Jointly advised by Professors Finale Doshi-Velez and Susan A. Murphy. Coursework on Bayesian machine learning, reinforcement learning, interpretable and explainable machine learning, probability.  <b>B.A. Applied Mathematics, University of California, Berkeley</b>  2014 - 2018  GPA 3.71. Coursework on machine learning, artificial intelligence, algorithms & theory, linear algebra, numerical analysis, etc.
EXPERIENCE	<b>Research Scientist Intern (Data Science &amp; Machine Learning), Etsy</b>  Summer 2021  <b>Technical Lead: Software Development Engineer, Amazon</b>  2018 - 2020
AWARDS	Derek Bok Certificate of Distinction in Teaching, Harvard University. 2022  RLDM Student Travel Fellowship, Brown University. 2022  EECS Outstanding Graduate Student Instructor Award, UC Berkeley. 2018  Dean's Honors List, UC Berkeley. 2016
TEACHING	<b>Graduate Teaching Fellow, Harvard University</b>  CS 181, Machine Learning. 2022 (4.95/5.00 on student evaluations)  <b>Teaching Assistant, University of California, Berkeley</b>  CS 61C, Machine Structures. 2017, 2018 (4.91/5.00 on student evaluations)
SKILLS	<b>Python, Pytorch, NumPy, Git, PyMC3, Java, Amazon Web Services (AWS), Xcode, React Native, Objective-C, JavaScript, Kotlin</b>

## PUBLICATIONS

**Anna L. Trella**, Kelly W. Zhang, Inbal Nahum-Shani, Vivek Shetty, Finale Doshi-Velez, Susan A. Murphy. "Reward Design For An Online Reinforcement Learning Algorithm Supporting Oral Self-Care." Proceedings of the 37th AAAI Conference on Artificial Intelligence (AAAI-23), 2023. **(Selected for an Oral)**

**Anna L. Trella**, Kelly W. Zhang, Inbal Nahum-Shani, Vivek Shetty, Finale Doshi-Velez, Susan A. Murphy. "Designing Reinforcement Learning Algorithms for Digital Interventions: Pre-Implementation Guidelines." *Algorithms*, 2022.

**Anna L. Trella**, Peniel N. Argaw, Michelle M. Li, James A. Hay. "Discrepancies in Epidemiological Modeling of Aggregated Heterogeneous Data." *Workshop at IJCAI 2021 on Artificial Intelligence for Social Good*. **(Selected for an Oral)**

## INVITED TALKS

### ***Designing Reinforcement Learning Algorithms for Mobile Health***

University of Pennsylvania, Ivy Collective Engineering Symposium. 2022

mHealthHUB, mDOT Center Webinar Series. 2022

### ***Designing Reinforcement Learning Algorithms for Digital Interventions: Pre-Implementation Guidelines***

RLDM Conference, Oral Presentation (top 7% of accepted papers). 2022

ICSA Applied Statistics Symposium, Precision Digital Health Care Via Machine Learning. 2022

Harvard University, RL at Harvard Workshop. 2022

Harvard University, SEAS Seminar Series. 2022

WiDS Cambridge Conference, Lightning Talks. 2022

### ***Oralytics: An Online Reinforcement Learning Algorithm Supporting Oral Self-Care***

Harvard University, Guest Lecturer for STAT 234: Sequential Decision-Making. 2022

Pennsylvania State University, QuantDev Methodology Brown-Bag Seminar. 2021

## PATENTS

Miguel Roman Durazo Almeida, Thanhthanh Anh Tran, Jongun Jung, Rohin Patel, **Anna L. Trella**, Tarmandeep Toor, Shih-Ta Peng. *Item Identification based on receipt image*. U.S. Patent 11,257,049, filed January 31, 2020, and issued February 22, 2022.

## LANGUAGES & HOBBIES

English (native), Mandarin Chinese (native), Spanish (proficient), Japanese (limited proficient)

Figure Skating (Senior Moves in the Field Gold Medalist)