

# Aishwarya Mandyam

am2@stanford.edu | aishwarya-rm.github.io

## Education

**Stanford University**, Stanford CA

- PhD Computer Science, Advised by Barbara Engelhardt and Emma Brunskill September 2022-

**Princeton University**, Princeton NJ

- PhD Computer Science, Advised by Barbara Engelhardt August 2020-May 2022

**University of Washington**, Seattle WA

- M.S Computer Science June 2020
  - Advised by Luis Ceze, Jeff Nivala, and Kevin Jamieson
- B.S Computer Science, B.A Philosophy June 2019

## Research Interests

Reinforcement learning, machine learning for healthcare, Bayesian statistics

## Publications and Posters

“Compositional Q-learning for electrolyte repletion with imbalanced patient sub-populations,” **Aishwarya Mandyam**, Andrew Jones, Jiayu Yao, Krzysztof Laudanski, Barbara E. Engelhardt (To appear at ML4H proceedings track 2023)

“[Adaptive Interventions with User-Defined Goals for Health Behavior Change](#)”, **Aishwarya Mandyam**, Matthew Joerke, Barbara Engelhardt, Emma Brunskill (To appear at ML4H 2023 findings track)

“[Kernel Density Bayesian Inverse Reinforcement Learning](#)”, **Aishwarya Mandyam**, Didong Li, Diana Cai, Andrew Jones, Barbara E. Engelhardt. (In submission) Poster at O’Bayes 2022, NeurIPS WiML 2022.

“[Guiding Efficient, Effective, and Patient-Oriented Electrolyte Replacement in Critical Care: An Artificial Intelligence Reinforcement Learning Approach](#)”, Niranjani Prasad\*, **Aishwarya Mandyam\***, Corey Chivers, Michael Draugelis, C. William Hanson III, Barbara E. Engelhardt, Krzysztof Laudanski. Journal of Precision Medicine

“[COP-E-CAT: Cleaning and Organization Pipeline for EHR Computational and Analytic Tasks](#)”, **Aishwarya Mandyam**, Jeff Soules, Elizabeth Yoo, Krzysztof Laudanski, Barbara E. Engelhardt. ACM BCB 2021

“[Estimating Influential Samples in the Fragile Families Challenge](#)”, **Aishwarya Mandyam**, Siena Dumas Ang, Barbara E. Engelhardt. NeurIPS WiML Workshop 2020 (poster)

“[Molecular Matchmaker: selecting peptide-aptamer binding pairs using machine learning](#)”, **Aishwarya Mandyam**, Yuhao Wan, Luis Ceze, Jeff Nivala, Kevin Jamieson. MLCB 2020 (Invited for Oral Presentation, 15% acceptance rate)

“[Porcupine: Rapid and robust tagging of physical objects using nanopore-orthogonal DNA strands](#)” Katie Doroschak, Karen Zhang, Melissa Queen, **Aishwarya Mandyam**, Karin Strauss, Jeff Nivala, Luis Ceze. Nature Communications 2020. UW Madrona Prize Runner-up.

“Reducing Identification Time in a Molecular Tagging System”, **Aishwarya Mandyam**, Katie Doroschak, Karen Zhang, Melissa Queen, Karin Strauss, Jeff Nivala, Luis Ceze. Grace Hopper Conference 2019, ACM Student Research Award 2nd Place. (poster)

## Work Experience

**Allen Institute for Artificial Intelligence**, *Research Intern*, Ultrasight

03/2019 – 09/2019

Advised by Vu Ha, Oren Etzioni

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- Implemented and analyzed custom computer vision models to detect veins and arteries in ultrasound videos; these models perform with higher accuracy and speed than state of the art models.

**Sage Bionetworks**, *Research Engineering Intern*, Bridge Team 09/2018 – 03/2019

- Designed and developed an Android app feature to measure cardiorespiratory fitness to be used in a National Institute of Health study with 1 million users.
- This feature teaches users how to measure their heart rate using a smartphone camera and provides feedback about their measurement using signal processing.

**Microsoft**, *Machine Learning Intern*, Xbox Machine Learning and Artificial Intelligence 06/2018 – 09/2018

- Designed and implemented a Convolutional Neural Network to detect highlight clips from game streams to enable gamers to share the best parts of their gameplay sessions, increasing the visibility of the Xbox gaming environment.

**Microsoft**, *Software Engineering Intern*, Xbox Shell Speech 06/2017 – 09/2017

- Built an end-to-end prototype that allows users to control the Xbox using Amazon Alexa and Cortana Assistant. Prototype was expanded to create a shipped feature and covered in [The Verge](#), [TechCrunch](#), [IGN](#), [Geekwire](#).

**Microsoft**, *Explorer Intern*, Outlook Satisfy Team 06/2016 - 09/2016

- Developed and deployed a C# Outlook plugin to help employees view information about their support tickets.

**Expedia**, *Software Developer Apprentice*, Cruise Team 06/2015 - 08/2015

- Implemented a responsive web design for 4 cruise shopping pages; project shipped at [expedia.com/cruises](http://expedia.com/cruises).

## Invited Talks

**American Statistical Association, Spring Chapter Meeting** 04/2021  
**Machine Learning for Computational Biology (MLCB)** 10/2020

## Awards + Fellowships

Stanford School of Engineering Fellowship (2022): Awarded a 1-year fellowship to cover rotations in my first year at Stanford.

ACM Student Research Competition Award (2019): Presented research at the Grace Hopper Conference and won 2nd place in the undergraduate research category.

Class of 2019 Allen School Undergraduate Service Award (2019): The Allen School service award recognizes 2 students in every graduating class for outstanding service contributions to the Allen School.

Husky 100 (2018): The Husky 100 recognizes 100 out of 40,000 UW undergraduate and graduate students who are making the most of their time at the UW.

## Teaching Experience

**UW CSE 415 Artificial Intelligence**, TA 09/2019 – 12/2019

## Volunteer Experience

**ACM Conference on Health Informatics and Learning** *Reviewer* 2021

**IEEE/ACM Transactions on Computational Biology and Bioinformatics** *Reviewer* 2021

**UW Association of Computing Machinery** *Chapter President, Event Coordinator* 06/2016 – 06/2018

**DubHacks**, *Co-Director* 05/2016 – 11/2017