Samantha Robertson

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Education

University of California, Berkeley – *Ph.D. Student, Electrical Engineering and Computer Sciences*

Advisors: Dr. Niloufar Salehi and Dr. Moritz Hardt

Stanford University – *B.S. Mathematical and Computational Science with Distinction*, 2019

Honors and Awards

- Best "New Horizons" Paper at MD4SG, 2020
- NSF Graduate Research Fellowship Program Honorable Mention, 2020
- EECS Excellence Award, 2019
- Elected to Phi Beta Kappa, 2019
- J.E. Wallace Sterling Award for Scholastic Achievement, 2019 *(awarded to the top 25 graduating students in the School of Humanities and Sciences)*

Research Experience

2020

Graduate Student Researcher, U.C. Berkeley – *Advised by Niloufar Salehi*

Applying mixed methods approaches to understand how families engage with student assignment algorithms for enrolling in public schools, and how users calibrate trust in machine translation systems.

2017 - 2019

Stanford Brain Interfacing Lab – *Advised by Paul Nuyujukian*

Developed real time visualization capabilities in C and Python to specialize a custom real-time open source software for systems neuroscience research. Implemented a Kalman filter neural decoder and ran a trial with seven human participants to validate the system.

FALL 2018

Stanford Computational Policy Lab – *Advised by Sharad Goel*

Analyzed nationwide police traffic stop data for racial bias using raw data visualization and the veil of darkness test proposed by Grogger & Ridgeway in 2006. Assessed the strengths and limitations of the test.

SUMMER 2018

Stanford Cardiovascular Biomechanics Computation Lab – *Advised by Alison Marsden*

Designed and implemented a graphical user interface in C++ with Qt for lumped parameter cardiovascular modeling in the open source cardiovascular modeling software SimVascular.

Publications

Samantha Robertson, Tonya Nguyen, and Niloufar Salehi. 2020. Modeling Assumptions Clash with the Real World: Configuring Student Assignment Algorithms to Serve Community Needs. Presented at the *4th Workshop on Mechanism Design for Social Good (MD4SG '20)*.

Samantha Robertson, Niloufar Salehi. 2020. What If I Don't Like Any of the Choices? The Limits of Preference Elicitation for Participatory Algorithm Design. Presented at the *Workshop on Participatory Approaches to Machine Learning at ICML '20*.

Pavan Mehrotra*, Sabar Dasgupta*, **Samantha Robertson**, and Paul Nuyujukian. 2018. An open-source realtime computational platform (short WIP paper). In *Proceedings of the 19th ACM SIGPLAN/SIGBED International Conference on Languages, Compilers, and Tools for Embedded Systems (LCTES '18)*.

Presentations

Configuring Student Assignment Algorithms to Meet Community Needs

- 4th Workshop on Mechanism Design for Social Good (MD4SG), 2020
- Workshop on Participatory Approaches to Machine Learning at ICML, 2020

A Graphical User Interface for Lumped Parameter Cardiovascular Modeling in SimVascular

- Stanford Bioengineering REU, 2018

LiCoRICE: A Open-source Realtime Computational Platform for Systems Neuroscience

- Stanford Neurosciences Institute Symposium, 2018
- Stanford Bioengineering REU, 2017
- Stanford Bio-X Symposium, 2017

Teaching

- AI for Medicine and Health Policy, *Graduate Student Instructor*, U.C. Berkeley, Fall 2020
- Data Challenge Lab, *Teaching Assistant*, Stanford University, Spring 2019
- Introduction to Computing at Stanford, *Instructor*, Stanford University