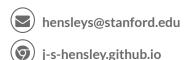
# Sarah Hensley





#### Education

#### PhD | Electrical Engineering Stanford | 2018-Present

- Research: Information Theory
- Advisor: Mert Pilanci
- GPA: 3.96 / 4.00

# MEng | Electrical Engineering & Computer Science

#### MIT | 2018

- Conc.: Artificial Intelligence
- GPA: 5.0/5.0

### **BS** | Electrical Engineering MIT | 2017

- GPA: 4.8/5.0
- HKN (EECS Honor Society)

#### Coursework

#### **Graduate Courses**

Machine Learning
Bayesian Inference
Algorithms for Inference
Graphical Models
Reinforcement Learning
Information Theory
Inference and Info Theory
Info Theory and Statistics
Randomized Algorithms
Convex Optimization

#### Math Background

Probabilistic Modeling Stochastic Processes Real Analysis Signals, Systems, and Inference Linear Algebra Differential Equations

#### Skills

#### Languages

Python • MATLAB

#### General

MFX • Linux/UNIX • Git

#### Experience

#### Stanford University | Graduate Researcher

with Mert Pilanci | March 2017 - Present

- Simulated serial and parallelized approximate sorting networks
- Identified connection between results and theoretical probabilistic underpinnings
- Drafted manuscript on application to improve speed of distributed computing

## MIT Institute for Medical Engineering and Science | Graduate Researcher Integrative Neuromonitoring and Critical Care Informatics Group | Sept. 2017 – June 2018

- Analyzed 118 patient-days of vital sign data and 23,000 bedside alarms
- Evaluated abnormal alarm data to develop false alarm prevention measures
- Authored thesis and presented poster at Medical Electronic Device Realization Center Workshop

#### LeafLabs | Software Intern

June - August 2017

- Built new Python repository to reconstruct high-resolution 3D images from 2D microscope images
- Adapted deconvolution algorithms and optics equations to reconstruct images
- Improved computation speed by 30x using Cython and parallel processing

## MIT Computer Science & Artificial Intelligence Lab | Undergrad Researcher in Robot Locomotion Group | June 2016 – June 2017

- Simulated mathematical models for the arm of NASA's humanoid robot Valkyrie
- Proved that centralized optimal control improved performance by 40% over decentralized controllers for the arm
- Presented poster at EECScon undergraduate research conference
- Selected out of 150 students to present poster to industry and academia leaders
- Won Best Research Presentation out of 150 students

#### Jet Propulsion Laboratory | Research Intern

June - August 2015

- Designed experiments to induce mechanical resonance while imaging objects
- Analyzed radar results to identify the position and vibrational frequency of objects
- Demonstrated the presence of the Doppler effect through signal processing

### Teaching

### Grad Course Assistant | Stanford CS 2690: Intro to Optimization %

September - December 2019

• Will write and grade problems for graduate class on optimization theory

#### Grad Teaching Assistant | MIT 6.008: Intro to Inference %

August - December 2018

- Created exam questions on inference algorithms and graphical models
- Taught problem-solving skills in bi-weekly recitations to 25-student sections
- Coordinated time-sensitive administrivia, like scheduling office hours every week