



## Education

### MS | Electrical Engineering

Stanford | 2018 - April 2020

- Research: Inference and Information
- GPA: 4.05 / 4.00

### MEng | Electrical Engineering & Computer Science

MIT | 2018

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

### BS | Electrical Engineering & Computer Science

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  
Deep Generative Models  
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

Experienced  
Python • MATLAB  
Familiar  
R • C++ • Julia

### General

LaTeX • Linux/UNIX • Git

## Experience

### Stanford University | Graduate Researcher

with Mert Pilanci | March 2019 – Present

- Simulated serial and parallelized approximate sorting networks in Python
- 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 2800 hours of vital sign data and 23,000 bedside alarms using Python
- 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 EECSScon 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 269O: Intro to Optimization

September - December 2019

- Wrote and graded 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