

## EXPERIENCE

### Google

Venice / Mountain View, CA

*Software Engineering Intern*

*Google Quantum AI*

Jun - Sep 2021

- Implemented, tested, and ran experiments for surface code crosstalk calibration on Google's quantum computers.
- Ran experiments and analyzed data to determine the comparative benefit of different pulse sequences.

*Google My Business*

Jun - Sep 2018

- Applied transformer language models, clustering algorithms, and dynamic templates to produce accurate merchant descriptions.

### UCLA

Los Angeles, CA

*Chakravarty Group Member*

2017 - 2022

- Trained transformer models to reproduce quantum ground states, beating conventional methods on highly-entangled states.
- Used unsupervised clustering techniques to identify nonequilibrium phases of matter.  
(Published as *Unsupervised learning eigenstate phases of matter*)

*Research with Professor Shenshen Wang*

2019 - 2022

- Characterizing phase transitions in GAN dynamics using effective models.  
(*Effective Dynamics of Generative Adversarial Networks*, in review)
- Resonance in biological search strategies (paper in preparation).

### CORNELL

Ithaca, NY

*Perelstein Group Research Assistant*

May 2015 - May 2016

- Developed programs in Python for implementing neural networks of arbitrary architectures (both fully connected and convolutional), later migrating to TensorFlow once it was released.
- Used neural networks for boosted top quark identification in LHC jets

## EDUCATION

### University Of California, Los Angeles

Los Angeles, CA

PhD in Theoretical Condensed Matter Physics

Sep 2016 - Jun 2022

Dissertation: *Many-Body Physics and Machine Learning*

M.S. in Physics

Sep 2017

Cumulative GPA: 4.0

### Cornell University

Ithaca, NY

Bachelor of Arts in Physics, Mathematics (Double Major)

Aug 2012 - May 2016

Upper Level Physics+Math GPA: 3.713

## SKILLS

**Python:** 6+ years of experience. Familiar with TensorFlow, PyTorch, Numpy, Scipy, Pandas, Matplotlib, Cirq, Qiskit, Jupyter/Colab Notebooks, Git, etc.

**Relevant Coursework:** Deep Learning Theory Summer School at Princeton 2021, CS239: Quantum Programming / Advanced Quantum Programming (Grade: A)

## SELECTED WORK

*Effective Dynamics of Generative Adversarial Networks*

Steven Durr, Youssef Mroueh, Yuhai Tu, Shenshen Wang

arXiv:2212.04580v1 [cond-mat.dis-nn]