Steven Durr

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EDUCATION

University Of California, Los Angeles — Los Angeles, CA
Chakravarty Research Group — Sep 2016 - Jun 2022
PhD in Theoretical Condensed Matter Physics
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

EXPERIENCE

UCLA — Los Angeles, CA

Chakravarty Group Member — Jan 2017 - Jun 22

- Applying transformer language models as variational ground states.
- Used unsupervised learning to identify nonequilibrium phases of matter.

Work with Professor Shenshen Wang

- Characterizing phase transitions in GAN dynamics (paper in preparation).
- Studying resonance in biological search strategies (paper in preparation).

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 understand 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.

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.
- Applied neural networks to boosted top quark identification in LHC jets

SKILLS

Python: 6+ years of experience. Familar 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 PUBLICATION

Unsupervised learning eigenstate phases of matter
Steven Durr and Sudip Chakravarty
Phys. Rev. B 100, 075102 – Published 1 August 2019