JACKSON MORRIS

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EXPERIENCE

Quantum Computing Research
Portland State University

📅 June 2020 - Present   📍 Remote

- Worked with Professor Fang Song of PSU to develop quantum algorithms and lower bounds for the classic problem of graph coloring
- Established the first. quantum algorithms for this problem, demonstrating an advantage over classical techniques
- Paper currently in submission, arXiv pre-print forthcoming

Quantitative Analyst Intern
NAVEX Global

📅 June - August 2019   📍 Lake Oswego, Oregon

- Organized and cleaned data from the worlds largest ethics and compliance database using Microsoft SQL Server, Excel, and various Python packages
- Spearheaded a project working with many groups across the company culminating in a presentation to the executive team on my work
- Created predictive tools to assess vulnerabilities for NAVEX customers and manage incident report data using machine learning models

Teaching Assistant and Grader
Art of Problem Solving

📅 June 2019 – October 2020   📍 Remote

- Graded and assisted for online courses including number theory, calculus, algebra, geometry, counting & probability, and more
- Gave detailed feedback on proof-based problems to gifted students
- Utilized $\LaTeX$ and Python in assisting and grading

Research Assistant
Reed College

📅 June 2018 - Sept. 2018   📍 Portland, Oregon

- I developed and tested the accuracy of various rating systems for sports teams, using statistical methods and R scripting
- Methods included linear and generalized linear modeling, Bayesian Inference, and Markov Chain - Monte Carlo methods
- Compared model prediction accuracy with well established rating systems

RECENT PROJECTS

Lyft Data Challenge 2019

- Wrote python code (pandas, scipy) to conduct an analysis on rider and driver data using various statistical modeling techniques in a very limited amount of time
- Created a professional write-up detailing findings and outlining our actionable recommendations for the company.
- Competed onsite in San Francisco with other finalists, placing in the top ten of 300 teams.

Directed Reading in Mathematics

- Focused on Morse theory and topology of Manifolds during fall quarter 2018
- The project culminated in a write up and a lecture given to faculty and students at the end of quarter colloquium
- Read current literature and gained an insight into the research process

EDUCATION

BS Mathematics
University Of California, Los Angeles

📅 Sept. 2017 – Mar. 2021

COURSEWORK

- Algorithms
- Complexity Theory
- Graph Theory
- Topics in Theoretical Computer Science
- Combinatorics
- Mathematical Statistics
- Probability Theory
- Advanced Linear Algebra

TECHNICAL SKILLS

- Python (Pandas, Scikit Learn, TensorFlow, NumPy, Sympy)
- C++
- R
- Matlab/Octave
- $\LaTeX$
- Haskell

HONORS AND AWARDS

- Lyft Data Challenge Finalist (2019)
- Moody's Mathematical Modeling Challenge: Scholarship Recipient, Honorable Mention(2017)
- AIME Qualifier (2016, 2017)
- Mathematics Student of the Year Award (2017)

ACTIVITIES

- UCLA Lacrosse Team
- Competitive Programming
- Quizbowl Team