JACKSON MORRIS

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EXPERIENCE

Quantum Computing Research

Portland State University

June - October 2020 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 including deep learning

Teaching Assistant and Grader

Art of Problem Solving

June 2019 – Present 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 in specialized courses
- 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.

Research 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 CS Theory
- Mathematical Statistics
- Probability Theory
- Advanced Linear Algebra
- Combinatorics I, II

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