

Allison Morgan

Education

University of Colorado Boulder, CO. PhD Computer Science, Expected May 2021

- Relevant Coursework: Network Analysis & Modeling, Machine Learning, Information Visualization

Reed College Portland, OR. BA Physics, May 2014

- Relevant Coursework: Algorithms & Data Structures, Scientific Computation
- Awards: Commendations for Academic Excellence in 2012-2014

Research

Research Assistant Computer Science Department, University of Colorado. Boulder, CO. August 2016 to Present

- Advised by Professor Aaron Clauset. Investigating social inequality within faculty hiring networks. Writing a web crawler to scrape faculty directories for all departments of PhD granting institutions. The objective is to collect longitudinal data on faculty hiring to better understand the interactions between the dynamics of faculty hiring and observed patterns of inequality.

Research Assistant Physics Department, Reed College. Portland, OR. May 2013 to August 2013

- Advised by Professor Joel Franklin. Computed bound state solutions to Schrödinger's equation for a potential due to gravity. Computations were done using 4th order Runge-Kutta in Mathematica. Presented my contribution to Reed's Physics Department.

Research Assistant Electrical and Computer Engineering Department, University of Illinois at Chicago. Chicago, IL. May 2012 to August 2012

- Advised by Professor Alan Feinerman. Experimentally determined the percolation threshold for rectangle shaped pores using a CO_2 laser cutting system. Learned MATLAB and AutoCAD quickly and independently. Presented results to undergraduates at a conference at the conclusion of the internship.

Professional

Data Scientist Lytics. Portland, OR. August 2014 to June 2016

- Planned and implemented products to help marketers understand and address their clients' behavior across channels. Some of these solutions included: anomaly detection on trends in segment sizes, improving an existing random forest model for predicting users' likelihood to return, and integrating with third-party services to classify the content users have viewed.

Science Education Intern Physics Lab, Oregon Museum of Science and Industry. Portland, OR. May 2013 to August 2013

- Presented demonstrations of physics related experiments and explained the science behind them to children and adults. Opened and closed the lab, maintained museum exhibits, managed 2-4 volunteers, and communicated over the radio regarding safety.

Tutoring & Grading

Nominated by faculty based on academic achievement. Positions held at Reed College in Portland, OR from August 2012 to May 2014.

- **Teaching Assistant:** General Physics I/II
- **Drop-in Center Tutor:** General Physics I/II
- **Grader:** General Physics I/II, Scientific Computation, Quantum Mechanics I
- **Individual Tutor:** General Physics I/II, Oscillations & Waves

Publications

Samuel Way, Allison Morgan, Aaron Clauset, Daniel Larremore, “The misleading narrative of the canonical faculty productivity trajectory” (In Progress)

Joel Franklin, Youdan Guo, Andrew McNutt, Allison Morgan, “Newton-Schrödinger System with Self-Field Coupling” *Classical and Quantum Gravity*, **35** 065010 (2015)

Allison Morgan, “Relativistic Strings & Ehrenfest’s Paradox” Undergraduate Thesis. Reed College (2014)

Allison Morgan, Jared Weddell, Alan Feinerman. “The Effect of Different Geometries on Percolation in Two Dimensions” *Journal of Undergraduate Research*, University of Illinois at Chicago, **6** 24-27 (2013)

Skills

Languages: Python, Go, R, Mathematica, MATLAB, HTML, CSS

Database Systems: Elasticsearch, MongoDB, Kafka, SQL

Design: D3, Tableau

Activities

- Constructed a musical staircase in an academic building using an Arduino Uno and 16 pairs of lasers and phototransistors. Featured in [Reed Magazine](#).
- Founded Reed’s women in STEM support group (“STEMfemmes”) and organized faculty lectures and student and alumni socials in support. Featured in [Reed Magazine](#).