

Allison Morgan

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RESEARCH INTERESTS

Computational Social Science, Social Networks, Social Inequality, Machine Learning, Women in Science

EDUCATION

University of Colorado at Boulder

Boulder, CO

Doctor of Philosophy in Computer Science (Expected 2021)

August 2016 – Present

- **Advisor:** Aaron Clauset
- **Relevant Coursework:** Network Analysis & Modeling, Machine Learning, Information Visualization, Chaotic Dynamics, Natural Language Processing, Algorithms, Probabilistic Models, Software Engineering

Reed College

Portland, OR

Bachelor of Arts in Physics; Academic Commendations 2012–2014

August 2010 – May 2014

APPOINTMENTS

University of Colorado at Boulder

Boulder, CO

Graduate Research Assistant, Computer Science Department

August 2016 - Present

Lytics (marketing technology start-up)

Portland, OR

Data Scientist

August 2014 - June 2016

Reed College

Portland, OR

Undergraduate Research Assistant, Physics Department

Summer 2013

PUBLICATIONS

S. F. Way, **A. C. Morgan**, A. Clauset, and D. B. Larremore, “The misleading narrative of the canonical faculty productivity trajectory” *Proceedings of the National Academy of Sciences, PNAS*, **114**(44), E9216–E9223 (2017)

J. Franklin, Y. Guo, A. McNutt, and **A. Morgan**, “Newton-Schrödinger System with Self-Field Coupling” *Classical and Quantum Gravity*, **35** 065010 (2015) (Listed alphabetically)

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

UNDER REVIEW

A. C. Morgan, S. F. Way, and A. Clauset, “Automatically assembling a full census of an academic field”

A. Filippova, C. Gilroy, R. Kashyap, A. Kirchner, **A. C. Morgan**, K. Polimis, and T. Wang, “Humans in the Loop: Priors and Missingness on the Road to Prediction” (Listed alphabetically)

A. C. Morgan, D. Economou, S. F. Way, and A. Clauset, “Prestige drives epistemic inequality in the diffusion of scientific ideas” (Co-first author)

IN PREPARATION

S. F. Way, **A. C. Morgan**, D. B. Larremore, and A. Clauset, “The Effects of Departmental Prestige on Researcher Productivity and Prominence”

POPULAR PRESS

D. B. Larremore, **A. C. Morgan**, and A. Clauset, “More Inclusive Scholarship Begins With Active Experimentation” *The Chronicle of Higher Education* (2017), [Link]

A. C. Morgan, “The Netrrability is a Newsigation of Exactual” *Towards Data Science* (2017) [Link]

A. C. Morgan “NOT Yet Another Anomaly Detection Package” *Lytics Developer Blog* (2015) [Link] (Featured in the front page of HackerNews on August 13th, 2015)

More work can be found on the Lytics Developer Blog, Towards Data Science, and my personal blog.

PRESENTATIONS

International Conference on Computational Social Science (IC2S2), (Expected) July 2018

Research Workshop on Demographic Research in the Digital Age (PAA), April 2018:
“Automatically assembling a census of an academic field”

International Conference on Network Science (NetSci), June 2017: “Ideas worth spreading: How does network position influence the spread of research topics?”

Colorado NCWIT Aspirations in Computing Award Event, April 2017: Women in Tech Panelist

AWARDS

National Science Foundation Graduate Research Fellowship, June 2018 – Present

IC2S2 Travel Scholarship, July 2018

CU Boulder Graduate School Travel Grant, July 2018

WORKSHOPS

Complex Systems Summer School (CSSS) at Santa Fe Institute, June–July 2018: Participant.

Summer Institute in Computational Social Science (SICSS) at Princeton University, June–July 2017: Participant. Fully-funded by the Russell Sage Foundation with a roughly 11% acceptance rate.

PROJECTS

University of Colorado at Boulder

August 2016 - Present

- **Automatically Assembling a Full Census of an Academic Field:** Wrote a web crawler capable of collecting longitudinal data on faculty hiring, which will be used to understand the complex and dynamic interactions between faculty hiring and observed patterns of inequality.
- **Modeling the Spread of Research Ideas:** Approximated the exchange rates between research quality, network influence, and institutional prestige. Tested causal hypothesis – faculty hiring acts as a conduit for ideas spreading – using numerical simulations.
- **Predicting Google Search Trends:** Used techniques from non-linear time series analysis and dynamical systems to predict Google search interest. [Code]
- **Extracting Employment and Publication Information from CVs:** Ongoing project extracting structured text from semi-structured PDFs. Data will be used to study scholarly productivity and employment.

Reed College

Summer 2013

- **Computational Quantum Mechanics and General Relativity Research:** Computed bound state energy solutions to Schrödinger’s equation for a potential due to gravity using 4th order Runge-Kutta in Mathematica.

Lytics

August 2014 - June 2016

- **Anomalyzer**: Open source software for anomaly detection in marketing trends, written in Go. [[Code](#)]
- **Multibayes**: Open source implementation of a Naive Bayesian classifier in Go. [[Code](#), [Post](#)]
- **Content Recommendation**: Integrated customer data platform and third party services to classify the content users viewed. [[Post](#)]

SERVICE

SICSS at University of Colorado Boulder, Expected Summer 2018: Co-organizer

The Web Conference (WWW) 2018: Subreviewer

Special Issue of Socius: Fragile Families Challenge 2017: Reviewer

International AAAI Conference on Web and Social Media (ICWSM) 2017: Subreviewer

RELEVANT SKILLS

Data science: Data/text mining, social network analysis, machine learning, written scientific communication, data visualization

Languages: Python, Go, R, Mathematica, HTML/CSS, Javascript

Databases: Elasticsearch, MongoDB, SQL

Design: D3, Tableau

OTHER ACTIVITIES

NCWIT Aspirations in Computing, January 2017–Present: Member

Reed College's Women in STEM group (STEMfemmes), August 2013–May 2014: Founder

Oregon Museum of Science and Education, May–August 2013: Physics Science Education Intern

Reed College's Physics Department, August 2011–May 2014: Teaching assistant, grader, drop-in center and individual tutor for introductory physics, quantum mechanics, oscillations and waves, and computational physics classes