

Hope Johnson | Curriculum Vitæ

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Education

Macalester College

B.A., Statistics, Economics

St. Paul, MN

2013–2017

- Cumulative GPA: 3.65
- Statistics Honors Thesis: "A Statistical Analysis of Body-Worn Cameras in Officer-Involved Shootings"
- Economics Capstone: "Natural Disasters and Mobile Banking Adoption in 55 Developing Countries"

Experience

Princeton Gerrymandering Project

Data Scientist

Princeton, NJ

May 2019 - current

- Serve as developer and lead statistician for the project, focused on building tools to remove barriers between citizens, communities, and re-districters in advance of 2021;
- Create tools to enable the collection & preparation of precinct data and coordinate with the wider technical community to tackle the problem of gerrymandering.

Mathematica Policy Research

Data Associate

Cambridge, MA

Sept. 2017–Feb. 2019

- Develop statistical models to evaluate the impact of Medicaid/Medicare intervention programs;
- Clean and analyze quantitative and qualitative health data;
- Build static data visualizations and dynamic web applications using CSS, HTML, and JavaScript for data scientists and statisticians;
- Organize and lead the data ethics group.

Bill & Melinda Gates Foundation

Research Assistant

Seattle, WA

Dec. 2016–June 2017

- Quantify and visualize gaps between tuberculosis-related health services and patient care among Kenyan households;
- Prepare figures and literature review for articles in the Journal of Infectious Disease.

Educating Sustainability Ambassadors Initiative

Statistics Researcher

St. Paul, MN

June - Aug. 2016

- Construct a linear mixed-effects model to describe the relationship between farm-to-school programs and student educational outcomes in Minnesota.

Independent and Freelance Projects

Court Reporting and Analysis

Court Watch NYC

Dec. 2018 - current

- Watch and report on weekly Brooklyn arraignment court proceedings;
- Draft e-communications comparing bail requests and decisions to district attorney policy;
- Re-structure the data collection, data storage, and data analysis processes for qualitative and quantitative arraignment court information collected by volunteers.

Accountable Policing Project - Boston

Independent Project

April 2018 – present

- Develop a database documenting instances of police misconduct within the Boston Police Department;
- Working in collaboration with individuals affiliated with Legal Aid Society, Measures for Justice, and the University of Michigan School of Law.

A Statistical Analysis of Body-Worn Cameras in Officer-Involved Shootings

Statistics Honors Thesis

Aug. 2016 – May 2017

- Research and analyze the relationship between body-worn cameras and victim race in officer-involved shootings using data from the Washington Post's "Fatal Force" database;
- Received the David Bressoud prize for excellence in communication of mathematics and social issues.

Racial Difference in the Predictive Accuracy of a Recidivism Risk Assessment Instrument

Survival Analysis Term Paper

Fall 2016

- Test if the COMPAS recidivism risk assessment tool predicts the risk of recidivism with equal accuracy across races using a Cox proportional hazards model;
- Awarded first place in the American Statistical Association's undergraduate research paper competition (USRESP).

Heroin and Naloxone: Disentangling an Epidemic

Econometrics Term Paper

Spring 2016

- Investigate the impact of making naloxone available to heroin users;
- Awarded third place in the Minnesota Economic Association's undergraduate research paper competition.

Information Technology

Advanced Proficiency: Python, R, Julia, LaTeX, Git, Stata, Microsoft Office

Intermediate Proficiency: JavaScript, HTML, CSS, AWS, D3.js, Node.js, Processing, Tableau

Basic Proficiency: SQL, SAS, Haskell

Awards, Grants, and Honors

2nd place, Hack for the Sea - Gloucester	2018
1st place, undergraduate research paper contest winner (American Statistical Association)	2017
Recipient of the David Bressoud prize for excellent communication skills in mathematics	2017

Eyeo Festival Student Grant	2017
3rd place, term paper contest winner (Minneapolis Federal Reserve)	2016
Educating Sustainability Ambassador (Howard Hughes Medical Institute/Macalester College)	2016
Omicron Delta Epsilon Economics Honors Society Member	2016
Dean's List (Macalester College)	2013-14
DeWitt Wallace Distinguished Scholar	2013-2017

Presentations and Talks

Friendly Tech Space

<i>Summer Meeting</i> "Centering Equity in Data Science"	July 2018
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Consortium for the Advancement of Undergraduate Statistics Education

<i>Electronic Statistics Research Conference</i> "Survival Analysis of a Criminal Justice Decision Algorithm"	November 2017
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Macalester College

<i>Honors Defense - Department of Applied Mathematics</i> "A Statistical Analysis of Body-Worn Cameras in Officer-Involved Shootings"	April 2017
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Northwestern University

<i>Graduate Research Opportunities for Women in Mathematics (GROW) Conference</i> "Summer Research as an Undergraduate"	Oct. 2016
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Languages

English: Fluent

French: Intermediate

Spanish: Basic

Arabic: Basic

Bambara: Basic

Conversational

Basic words and phrases only

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