

RAVEN MCKNIGHT

Statistician and data scientist seeking opportunity to engage in meaningful research & discovery for social good. I have worked on projects with Metro Transit, Saint Paul City Council, and The National Gallery of Art.



EDUCATION

2020
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2016

- **B.A., Applied Math & Statistics**
Macalester College

📍 Saint Paul, MN

- Honors Thesis: Space, Time, Transit: Spatio-temporal Models of Bus Ridership in the Twin Cities
- Minors in Geography & Creative Writing
- Key coursework: Bayesian Statistics, Correlated Data, Statistical Machine Learning, Computational Linear Algebra, Urban GIS, 2D Design



WORK EXPERIENCE

2019

- **Research & Analytics Data Science Intern**

Metro Transit

📍 Minneapolis, MN

- Working to update Metro Transit's Transit Market Areas in a practical, statistically rigorous manner
- Support internal data requests, visualization, and Shiny app development
- Facilitating collaboration with Macalester students to complete data science projects

2019
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2018

- **Office Assistant**

Macalester College

📍 Saint Paul, MN

- Work in the Mathematics, Statistics, and Computer Science department office
- Organize department-wide event planning & conduct daily secretarial tasks



RESEARCH EXPERIENCE

2019

- **Space, Time, and Transit: A Spatio-temporal Model of Bus Ridership in the Twin Cities**

Macalester College

📍 Saint Paul, MN

- Ongoing honors thesis project
- Using Bayesian methods and APC data to analyze trends in bus ridership across space and time

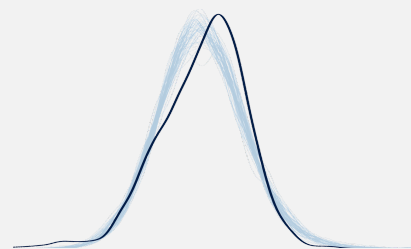
2019

- **Researcher**

National Gallery of Art

📍 Remote

- Conducting data science research to analyze the Gallery's collection data
- Presenting to curators at the Gallery



CONTACT

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SKILLS

R, Shiny, Git, ArcGIS, QGIS, Leaflet, LaTeX, bookdown, blogdown, Python, SQL, Excel, Stan, JAGS, Hugo, Adobe Creative Suite

INTERESTS

Spatio-temporal statistics
Public transit
Urban planning
RShiny development
Reproducible research
Open source, open data
Visualization & design
Civic engagement

Source code: github.com/ravenmcknight/cv.

2019



Saint Paul 3K Initiative

Saint Paul City Council

📍 Saint Paul, MN

- Class project to support Saint Paul City Councilmember efforts to provide affordable, accessible childcare to all 3- and 4-year old children in Saint Paul through data visualization and GIS
- Conduct primary data collection to develop database of existing child-care centers



TEACHING EXPERIENCE

2019

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2018



Teaching Assistant

Macalester College

📍 Saint Paul, MN

- Linear Algebra, Spring 2018, Fall 2018
- Applied Multivariable Calculus 1, Spring 2019
- Correlated Data (senior capstone course), Fall 2019

2017



Instructor

Cow Tipping Press

📍 Minneapolis, MN

- Taught a radically inclusive writing workshop for adults with developmental disabilities
- Developed engaging lessons for students with diverse backgrounds & abilities
- Published student work and held successful public reading



VOLUNTEERING & SERVICE

2019

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2018



Hiring Committee Member

Macalester College

📍 Saint Paul, MN

- Recruited to be an equal voting member in the hiring process for mathematics, statistics, and computer science professors
- Evaluate job applications, conduct interviews, and coordinate student involvement in campus visits
- Participated in two successful and one ongoing search

2019



Class Agent

Macalester College

📍 Saint Paul, MN

- Nominated to be an agent and encourage students & alum to donate to Macalester in support of financial aid

2019



Facilitator

Macalester College Data Science for Social Good

📍 Saint Paul, MN

- Co-run Macalester's Data Science for Good Group
- Develop instructional material for students being introduced to "real world" data
- Connect students to community partners and facilitate projects

2018



Committee Member

Macalester Women in Math, Statistics, and Computer Science

📍 Saint Paul, MN

- Encourage gender diversity in Math, Statistics, and Computer Science through networking and professional development

2017

I love teaching and learning about pedagogy. I enjoy writing accessible tutorials for my peers and encouraging more women and typically underrepresented students to pursue statistics and data science!

2016



Macalester Mentor

Macalester College

📍 Saint Paul, MN

- Mentored low-income, first-generation high school students through the college application process



TALKS & PRESENTATIONS

2019



Block Groups, Buses, and Bayes: A Spatial Model of Bus Ridership in the Twin Cities

Electronic Undergraduate Statistics Research Conference 📍 Remote

- Upcoming presentation of the first phase of my honors research

2019



Acquiring the NGA: An Exploration of The National Gallery of Art's Acquisition History

National Gallery of Art

📍 Washington, DC

- Upcoming presentation of a robust Shiny app and key takeaways for Gallery staff

I'm looking forward to giving my first academic talks in the coming months!