Raven **McKnight**

STATISTICIAN & DATA SCIENTIST
Minneapolis, MN

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Education

Macalester College   *Sept 2016 - May 2020*

BA IN APPLIED MATHEMATICS AND STATISTICS (HONORS), SUMMA CUM LAUDE   *Saint Paul, MN*

- Minors in Geography (GIS) and Creative Writing
- Awarded The Kaplan Award for Acheivement in Data Science

TWIN CITIES BUS RIDERSHIP: A SPATIAL BAYESIAN ANALYSIS

- Statistics honors thesis conducted in collaboration with Metro Transit

Work and Teaching Eperience

Associate Data Scientist - Community Development Research   *June 2021 - present*

METROPOLITAN COUNCIL   *Saint Paul, MN*

- Analyzing visitation to Minnesota parks and trails using locations-based services data

Data Science Intern - Research and Analytics   *June 2019 - May 2021*

METRO TRANSIT   *Minneapolis, MN*

- Designed, implemented, and maintain a spatial Bayesian direct demand model of bus ridership
- Identified novel predictors of ridership in the region and introduced a new demographic survey question to the agency
- Analyze performance data and develop measurable goals supporting agency-wide equity initiatives
- Provide ad-hoc reports for departments across the agency

Data Science Intern - Research and Analytics   *June 2019 - present*

METRO TRANSIT   *Minneapolis, MN*

- Design and build R Shiny apps (visualization dashboards) for internal use

Teaching Assistant   *Jan 2018 - May 2020*

MACALESTER COLLEGE MATHEMATICS, STATISTICS, AND COMPUTER SCIENCE DEPARTMENT   *Saint Paul, MN*

- Served as a teaching assistant for Linear Algebra (Spring 2018, Fall 2018), Applied Multivariable Calculus 1 (Spring 2019, Spring 2020), Correlated Data (Fall 2019), Causaul Inference (Spring 2020), and Introduction to Statistical Modeling (Spring 2020)
- Directed weekly office hours and attended classes to assist with activities
- Effectively communicated complex mathematical concepts and programming skills to a wide audience with varying academic backgrounds
- Graded homework and communicated with professors regarding class progress and adjustments
- Shifted to online office hours in Spring 2020 to support students in introductory classes through the transition to online learning

Office Assistant   *Aug 2018 - Mar 2020*

MACALESTER COLLEGE MATHEMATICS, STATISTICS, AND COMPUTER SCIENCE DEPARTNMENT   *Saint Paul, MN*

- Assisted with department-wide planning and daily secretarial tasks
- Helped facilitate events such as weekly coffee breaks and annual block parties

Instructor   *Fall 2017*

COW TIPPING PRESS   *Saint Paul, MN*

- Taught inclusive creative writing workshops for adults with developmental disabilities
- Developed engaging lessons for students with diverse backgrounds and abilities
- Published student work and hosted a successful public reading

Data Science Researcher   *Fall 2019*

NATIONAL GALLERY OF ART   *Remote*

- Analyzed the Gallery's collection for gender diversity in acquisition practices
- Presented findings at the Gallery as the only undergraduate team
- Developed prototype for an internal R Shiny dashboard to monitor collections
- Provided recommendations for data best practices

Saint Paul 3K Initiative   *Fall 2019*

SAINT PAUL CITY COUNCIL   *Saint Paul, MN*

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

Volunteering and Service

Tenure Track Hiring Committee Member
Fall 2018 and Fall 2019

MACALESTER COLLEGE MATHEMATICS, STATISTICS, AND COMPUTER SCIENCE DEPARTMENT
Saint Paul, MN

- Selected by department to be an equal voting member on the Committee Member to hire tenure track professors
- Conducted interviews and evaluated job applications
- Coordinated student events during candidate campus visits and administered student surveys
- Served on three successful Committee Members, resulting in three successful tenure track hires in Mathematics, Applied Mathematics, and Statistics

Class Agent
Sep 2019 - Mar 2020

MACALESTER COLLEGE
Saint Paul, MN

- Nominated to serve as an agent and encourage students and alum to donate to Macalester in support of financial aid
- Conducted fundraising outreach and education for peers on campus

Committee Member
May 2017 - May 2018

MACALESTER WOMEN IN MATHEMATICS, STATISTICS, AND COMPUTER SCIENCE
Saint Paul, MN

- Encouraged gender diversity in Math, Statistics, and Computer Science through networking and professional development
- Held events such as female faculty panels and weekly study breaks

Macalester Mentor
May 2016 - May 2017

MACALESTER COLLEGE
Saint Paul, MN

- Mentored low-income, first-generation high school students through the college application process
- Led tours of Macalester's campus and spoke on panels about financial aid and college life

Talks and Presentations

2021	**Analyzing Bus Ridership with a Spatial Direct Demand Model**: Poster session presenting benefits of spatial modeling to transportation professionals
2020	**Twin Cities Bus Ridership: A Spatial Bayesian Analysis**: Honors thesis defense
2019	**Intent in Acquisition**: Presented R Shiny app and findings to Gallery curators and staff

Honors and Awards

| 2020 | **Kaplan Award for Acheivement in Data Science**: Macalester College |
| 2019 | **DataFest Best in Show**: Macalester College |

Publications

| 2020 | **Meandering Minneapolis: A Cultural Atlas**: `https://www.flipsnack.com/macalester/meanderingminneapolis/full-view.html` |

Technical Skills

Analytics and Programming: R/RShiny, Python, SQL, Tableau, Jupyter, ArcGIS, QGIS, Stan, JAGS

Cloud and Distributed Computing: Hadoop, Docker, AWS

Machine Learning: Tensorflow, scikit-learn

Other: Bayesian modeling, time series modeling, spatial modeling, version control/Github, LaTeX, Adobe Creative Suite, Django, Hugo, bookdown/blogdown