

Katie Jolly

CONTACT INFORMATION katiejolly6@gmail.com <https://github.com/katiejolly>
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EDUCATION **Macalester College, St. Paul, MN** Spring 2019 (expected)
Majors: Applied Mathematics/Statistics and Geography GPA 3.62

Selected courses: Statistical Research Methods in Geography; Statistical Computing and Machine Learning; Metro Analysis; Health GIS; Probability; Core Concepts in Computer Science; Survival Analysis; 2D Design; Bayesian Statistics (Sp. 2019); Correlated Data (Sp. 2019); Cultural Atlas Production (Sp. 2019)

TECHNICAL SKILLS Software and Programming Languages: R, ArcGIS, QGIS, GitHub, Excel, Python, SQL, HTML5/CSS, LaTeX, Tableau, Django, Jekyll, R Shiny, Adobe Illustrator & InDesign, Leaflet

Methods: spatial data science, regression, cartography/design, survival analysis, Markov chain Monte Carlo, data wrangling, report writing, data visualization, interactive web maps, spatial modeling, text analysis, R package development, tutorial writing, teaching, map digitization, spatial network analysis, technical communication, model evaluation, statistical computing

PROFESSIONAL EXPERIENCE **Macalester College Math, Statistics, and Computer Science Department**
Teaching Assistant, MATH 253: Machine Learning and Statistical Computing Jan. - May 2019

- Attend class to assist with in-class activities and lectures
- Hold four office hours per week to answer homework and general questions
- Serve as a mentor for students interested in data science and statistics beyond the class
- Grade in-class activities and homeworks promptly
- Meet regularly with professor to talk about my work

Voting Rights Data Institute, MIT/Tufts/Harvard, Cambridge, MA

Undergraduate Summer Fellow June - August 2018

- Worked on weekly projects related to math and gerrymandering
- Organized a team to build an open source shapefile of 2016 voting precincts in Ohio using digitization of PDF maps and computational methods to approximate boundaries in counties without maps
- Presented updates weekly in an informal session with other fellows and mentors
- Pair-programmed an interactive Shiny app showing the output from the MCMC algorithm that creates millions of potential districting plans by mapping district flips of individual precincts

Macalester College Math, Statistics, and Computer Science Department

Teaching Assistant, COMP 112: Introduction to Data Science Aug. 2017 - Dec. 2018

- Attended every class to assist with in-class activities and lectures
- Held at least four office hours per week to answer homework and general questions
- Served as a mentor for students in the first year seminar section
- Graded in-class activities promptly

BlueLabs, Washington, DC

Data Science Intern

June - Aug. 2017

- Worked on the data science team doing projects related to political analytics
- Created maps for use in professional presentations
- Wrote Python scripts to scrape web data

Planned Parenthood, St. Paul, MN

Statistical Consultant

Jan. - May 2017

- Built logistic models to predict no-shows
- Applied network analysis and spatial autocorrelation to determine the optimal clinic to open for late hours
- Communicated findings to Planned Parenthood staff in formal presentation to inform changes in scheduling procedures

HONORS AND AWARDS

2019 AAG Marble-Boyle Undergraduate Achievement Award in Geographic Science

2018 eUSR Conference Best Video Presentation

2018 MN GIS/LIS Student Scholar and First Place in Presentation Competition

2017-2018 Macalester Student Educator of the Year Award

COMMUNITY LEADERSHIP

RLadies- Twin Cities

Co-organizer

Dec. 2018 - present

Math, Statistics, and Computer Science Department

Student Representative

Sept. 2018 - present

Women in Math, Statistics, and Computer Science Committee

Committee Member

Dec. 2017 - present

R PACKAGES

Jolly, K; Kelly, K. (2019). approxprecincts: Approximate Voting Precinct Boundaries Using Voterfile Addresses. R package version 0.0.0.9000. <https://github.com/ykelly/approxprecincts>

Jolly, K. (2018). advicegiveR: R Wrapper for the Advice Slip API. R package version 1.0.0. <https://github.com/katiejolly/advicegiveR>

PRESENTATIONS

Spatial Data Science in R

Planned Invited Lecture at University of Minnesota, Aug. 2019

Digitizing, Districting, and Data: Creating an Open-Source Precinct Shapefile for Ohio

eUSR Conference, Nov. 2018

Digitizing, Districting, and Data: Creating an Open-Source Precinct Shapefile for Ohio

MN GIS/LIS Conference, October 4, 2018

Political donations from STEM community: Learning dplyr!

RLadies- Twin Cities, December 9, 2017

Writing narratives with data: An introduction to ggplot2!

RLadies- Twin Cities, November 18, 2017

Proud leaders: How women in tech talk about themselves on Twitter

eUSR Conference, Nov. 2017

Proud leaders: How women in tech talk about themselves on Twitter

Hack and Tell DC, August 15, 2017