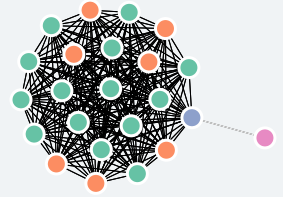


LIZ ROTEN

I am a highly motivated data scientist and cartographer with a passion for data visualization. I make complex topics easy to understand using compelling visual design. My static and interactive visualizations are attractive and powerful tools for decision making.



EXPERIENCE

Current
|
2018

Data Scientist

Metropolitan Council

📍 St. Paul, MN

- Data scientist in community development research and travel research and modeling.
- Duties include data visualization, research methods and statistical model development, and R package development and maintenance.
- Promoted from Associate in May 2021



EDUCATION

2018
|
2014

B.A., Geography, (Data Science, Community and Global Health)

Macalester College

📍 St. Paul, MN

- Emphasis on data science, GIS, quantitative research methods, and visual design



SELECT PROJECTS AND TALKS

September
2023

The 'I' in Team - Peer-to-peer best practices for growing data science teams¹

posit::conf

📍 Chicago, IL

- How to gracefully expand your team without pulling your hair out

May
2023

Transportation System Performance Evaluation²

Metropolitan Council

📍 St. Paul, MN

- A comprehensive review of the Twin Cities transportation system, built with R and Quarto

July
2022

Oddly Satisfying - Find delight in the mundane³

rstudio::conf(2022)

📍 Washington, D.C.

- How to take a project you hate and turn it into something you love

February
2022

COVID-19 Surveillance at the Metro Plant⁴

Metropolitan Council

📍 St. Paul, MN

- Open source project and R Shiny app

CONTACT

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🐦 [LizRoten](#)

🌐 [eroten](#)

🌐 [lizroten.com](#)

in [eroten](#)

View this CV online with links at [lizroten.com](#)

TECHNICAL SKILLS

R
R Shiny
R package development
HTML/CSS
Tableau
Adobe Illustrator
VS Code
JavaScript
Git/GitHub
ESRI Products

OPEN SOURCE CONTRIBUTIONS

councilR: Organization specific package for consistent style and data practices.

streetlightR: R wrapper for StreetLight InSight® API.

covid-poops: Shiny app for monitoring COVID-19 viral presence in metro wastewater.

December
2021

Regional Truck Corridor Study⁵

Metropolitan Council

📍 St. Paul, MN

- Making a legacy project reproducible

March
2021

Regional Parks and the American Community Survey⁶

Metropolitan Council

📍 St. Paul, MN

- Interactive visualization displaying regional parks and trails in context with American Community Survey (ACS) demographic data

February
2021

Twin Cities Rent Trends⁷

Metropolitan Council

📍 St. Paul, MN

- Interactive dashboard for analyzing rental housing market trends in the seven-county Twin Cities region
- Users can compare metrics by data source and visualize the relationship between rent and vacancy rates

October
2020

Monitoring public adherence to social distancing guidelines with traffic data⁸

2020 AMPO Virtual Conference

📍 Remote

- To estimate public adherence to social distancing guidelines during the Coronavirus outbreak, we analyzed departures from typical traffic volumes on the metro freeway system of the Twin Cities region. A robust modeling approach, open-source code repository, and web-based dashboard for interacting with the data are assisting decision makers in Minnesota as they update social distancing guidelines and monitor economic recovery.

October
2020

Using Location Based Services Data for Calculating the Greenhouse Emissions of Communities in the Minnesota Metropolitan Region⁹

2020 AMPO Virtual Conference

📍 Remote

- To address the scarcity of transportation emissions data in Minnesota, the Metropolitan Council of the Twin Cities has developed greenhouse gas emission estimates for transportation and land for cities, townships, and counties of the Twin Cities Metropolitan Region. This session will demonstrate how to leverage big data to centralize this type of research, save public funding, and enable communities to focus their efforts on implementing strategies to become more sustainable.

October
2020

councilR¹⁰

Metropolitan Council

📍 St. Paul, MN

- Created and maintained an organization specific R package
- Package includes templates, color palettes, and standard data processing functions




July
2020

Greenhouse Gas Emissions from Passenger and Commercial Transportation<https://www.lizroten.com/project/greenhouse-gas-inventory/>

Metropolitan Council

📍 St. Paul, MN

- Independently developed technique for estimating greenhouse gas emissions from commercial and passenger vehicles
- Collaborated with colleagues to include data in comprehensive greenhouse gas emissions inventory

July 2020	Minimum distance to COVID-19 testing facilities¹¹ Metropolitan Council <div>  St. Paul, MN </div> <ul style="list-style-type: none"> • A map series analyzing how COVID-19 testing centers are distributed across Minnesota
June 2019	Como Regional Park Hex Grid StreetLight Analysis¹² Metropolitan Council <div>  St. Paul, MN </div> <ul style="list-style-type: none"> • Visualize high activity areas within Como Regional Park and seasonal trends
September 2017	Chuck Green Civic Engagement Fellowship JustUs Health <div>  St. Paul, MN </div> <ul style="list-style-type: none"> • Independently researched mental health disparities through large-scale client survey and literature review • Gathered comprehensive feedback from JustUs staff through focus groups and interviews



SELECT DATA SCIENCE WRITING

April 2021	Radial rtistry¹⁴ lizroten.com <ul style="list-style-type: none"> • Generative art with ggplot2
March 2021	Maps with {edgebundle}¹⁵ lizroten.com <ul style="list-style-type: none"> • Mapping US flight networks
April 2020	Finding the perfect sock pattern with ravelRy¹⁶ lizroten.com <ul style="list-style-type: none"> • Using the Ravelry API to find just the right sock pattern
February 2020	Housing Density in US Cities¹⁷ lizroten.com <ul style="list-style-type: none"> • Examining residential zoning in Pittsburgh, Austin, and Boston
October 2019	Fisk's 'Mississippi Meander' in R¹⁸ lizroten.com <ul style="list-style-type: none"> • A few maps inspired by Harold Fisk's 1944 geological investigation
December 2017	3 Years of Mental Health: A quantified-self story¹⁹ lizroten.com <ul style="list-style-type: none"> • Mapping my travel patterns and mental health from 2015-2017

I blog about data science and visualization on my website lizroten.com.¹³

November
2017

HIV and African American Populations in the US²⁰

lizroten.com

- A value-by-alpha map showing the intersection of African American populations and HIV prevalence

LINKS

- 1• <https://www.lizroten.com/team/>
- 2• <https://www.lizroten.com/project/tspe/>
- 3• <https://www.lizroten.com/oddly/>
- 4• <https://www.lizroten.com/project/covid-poops/>
- 5• <https://www.lizroten.com/project/truck-corridor-study/>
- 6• <https://www.lizroten.com/project/regional-parks-acs/>
- 7• <https://www.lizroten.com/project/twin-cities-rent-trends/>
- 8• <https://www.lizroten.com/talk/ampo-covid-traffic/>
- 9• <https://www.lizroten.com/talk/ampo-streetlight-ghg/>
- 10• <https://lizroten.com/project/councilr-package/>
- 11• <https://www.lizroten.com/project/mdh-covid-maps/>
- 12• <https://www.lizroten.com/project/como-hex-streetlight-parks/>
- 13• <https://www.lizroten.com/post/>
- 14• <https://www.lizroten.com/post/rtistry-with-contour/>
- 15• <https://www.lizroten.com/blog/maps-with-edgebundle/>
- 16• <https://www.lizroten.com/blog/finding-the-perfect-sock-pattern-with-ravelry/>
- 17• <https://www.lizroten.com/blog/housing-density-in-us-cities/>
- 18• <https://www.lizroten.com/blog/fisk-s-mississippi-river-meander-in-r/>
- 19• <https://www.lizroten.com/blog/3-years-of-mental-health-a-quantified-self-story/>
- 20• <https://www.lizroten.com/blog/hiv-and-african-american-populations-in-the-us/>