Tableau Lab 2 Answer Sheet

DUE: Monday, Sep. 23, 2024, 10:00 AM

What you need (download from Canvas):

hate_crimes.zip (contains hate_crimes.csv & README.md)

What to turn in: One PDF file

0. <mark>The link to your public Tableau dashboard</mark>: (Please make it visible to the public)
1. Answer sheet (PDF)

Notes:

Please use this answer sheet to answer the questions. You can include partial screenshots of displays/visualizations if the entire display is too big. We just want to know that you were able to generate the answer/transformation.

The data and analysis in this assignment are based on the article: Higher Rates Of Hate Crimes Are Tied To Income Inequality | FiveThirtyEight

Part I: Phenomenon

"..., both data sets reveal that hate incidents aren't uniformly distributed across the United States. In other words, a greater number of hate incidents were reported in some states (per 100,000 people) than in others…"
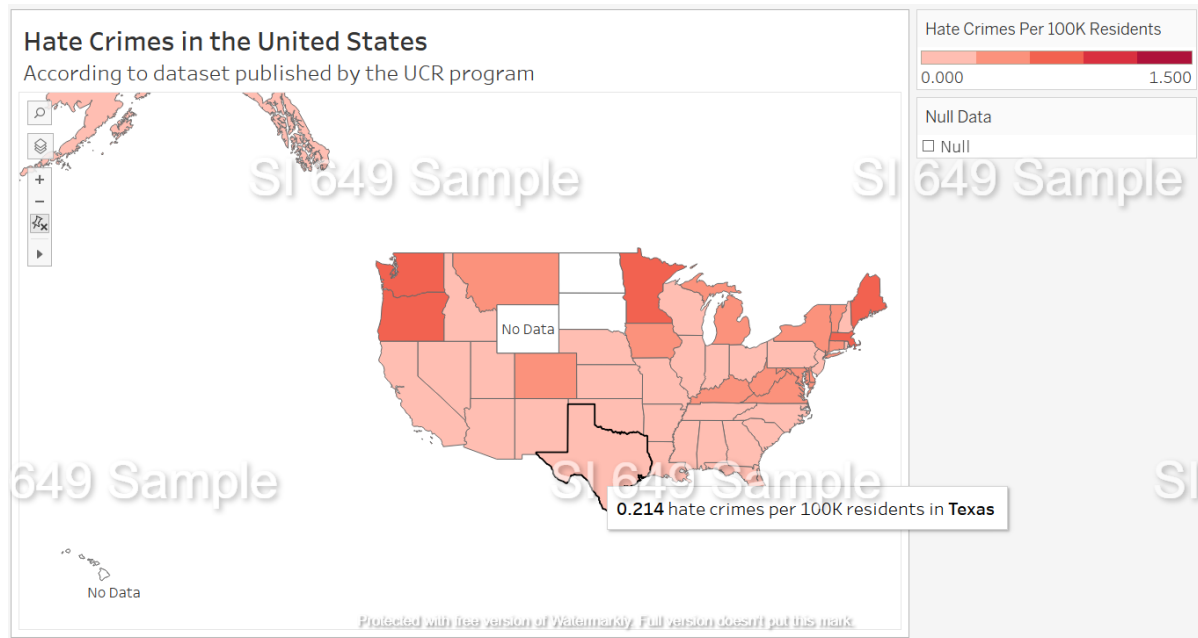
Question 1.1: Visualize **Hate Crimes Per 100K Splc** for each state in the U.S. (2 pts)

Please replicate the given image using Tableau.

Hint: create a new group for "is null data or not".
Hint: hide non-null data in the legend.
Hint: customize the tooltips using variables.

Hate Crimes in the United States
According to dataset published by the UCR program

Hate Crimes Per 100K Residents
0.000 — 1.500

Null Data
☐ Null

No Data

No Data

0.214 hate crimes per 100K residents in **Texas**

Question 1.2: Add an annotation to the state that has the **highest** number of Hate Crimes Per 100K Residents. (0.5 pt)

Hint: create a meaningful and concise description.
Hint: include the reason why this data point should draw the audience's attention.

Question 1.3: Explain the **color palette** choice in the sample visualization. How does it compare to a diverging color palette? How does it compare to a non-stepped color palette? (0.5 pt)

Part II: Socioeconomic Factors

Question 2.1: Visualize the relationship between **Hate Crimes Per 100K Splc** and the **percent of adults 25 and older with at least a high school degree** for each state in the U.S. using **a linear model**. (0.5 pt)

Hint: create a scatterplot.
Hint: add a trend line using the linear regression model.

Question 2.2: Is the model significant? Add an appropriate annotation to demonstrate your answer. (0.5 pt)
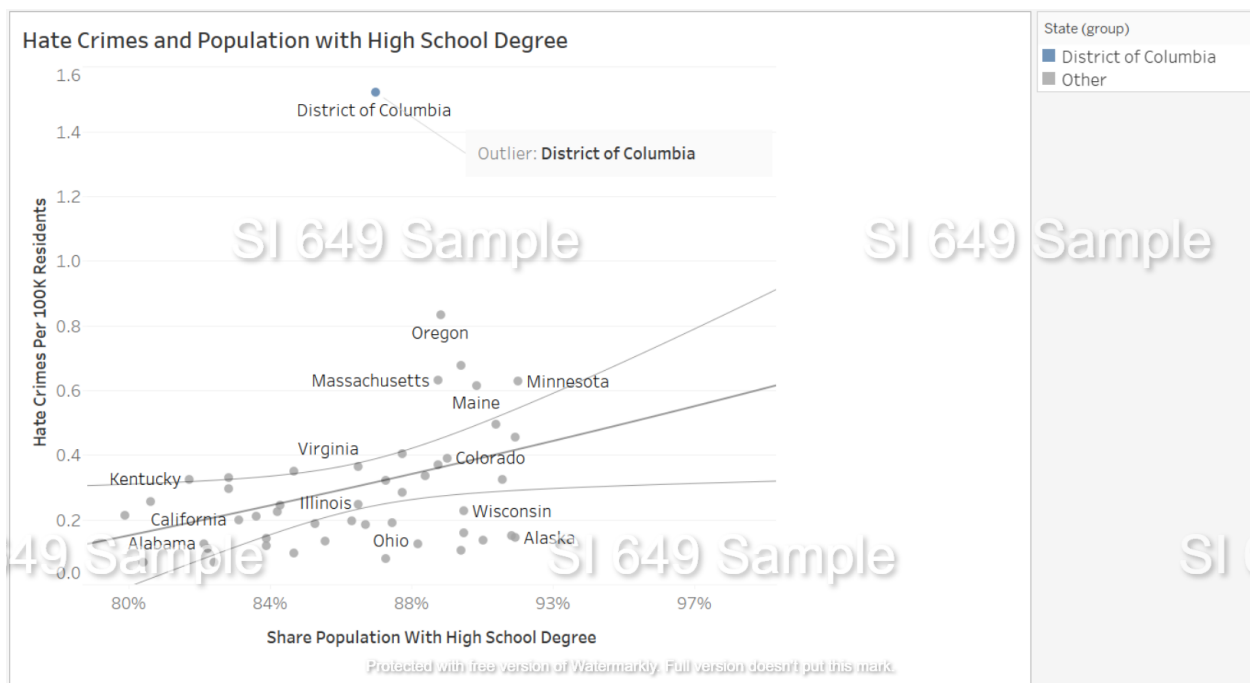
*Hint: **describe** the trend model.*
Hint: [Significance Test for Linear Regression | R Tutorial](#)

Question 2.3: **Replicate** this sample image in Tableau. How is it different from yours? What are the advantages and disadvantages of the sample? (2 pts)

Please replicate the given image using Tableau.

Hint: select "edit all trend lines"
Hint: create a new group for "District of Columbia".

Part III: Dashboard

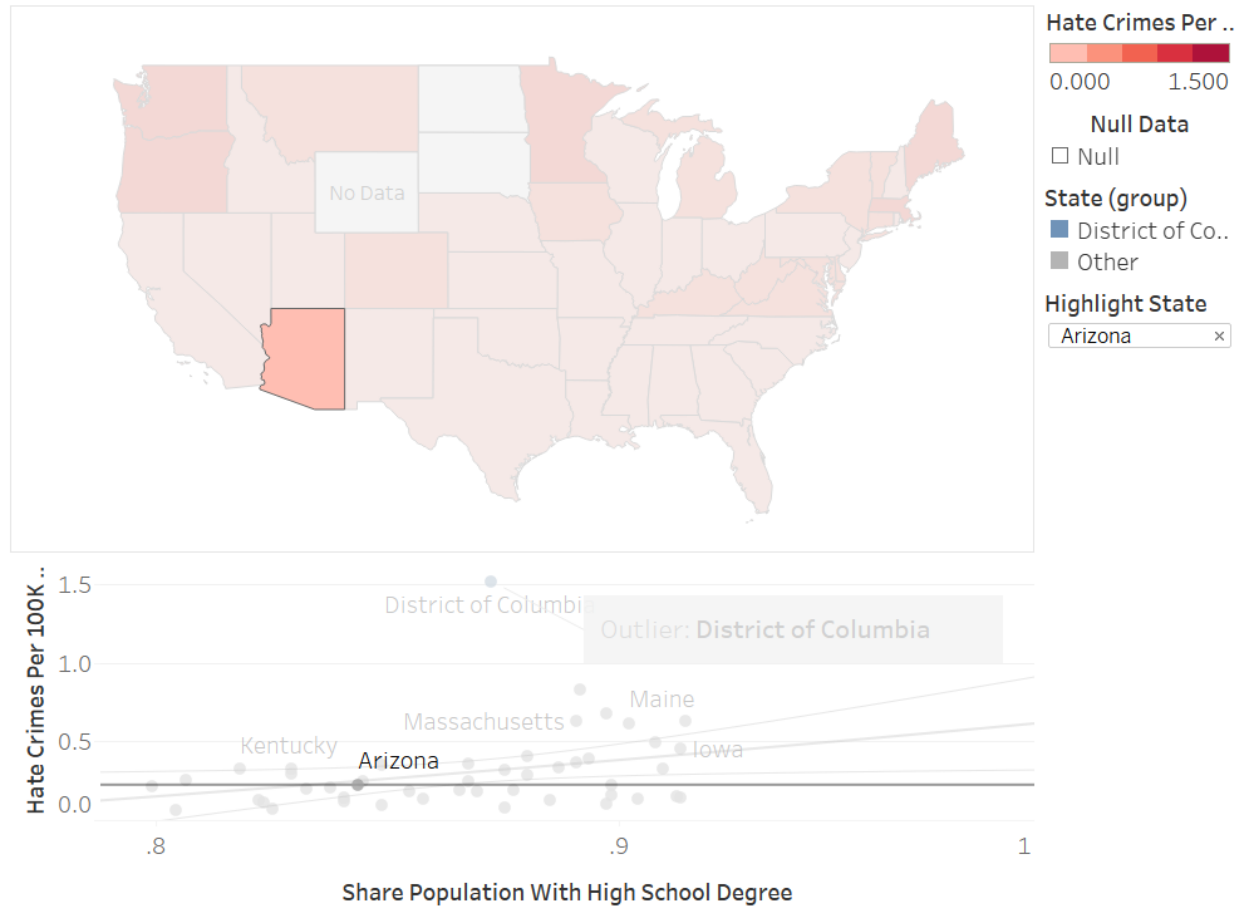Question 3.1: Create a **dashboard** with the two graphs you created for Part I and Part II. (0.5 pt)

Question 3.2: Create a **highlighter** for *state*. (0.5 pt)
Hint: creating a highlighter for either graph would work.

Question 3.3: Create a **highlight action** that would run on **select** and only highlight *state*. (1 pt)

The highlight action should look similar to the example below. (Don't need to be the same!)

Question 3.4: Refine and upload your dashboard online. (2 + 0.5 pts)

The final dashboard should look similar to the example below. (The layout of the dashboard should be similar to the sample image.)

Hint: image source: [What are the hate crime laws and should they be reformed? - Theos Think Tank](...)
Hint: pay attention to the layout of the legend.
Hint: think about what needs to be included in the text section (e.g., background, findings, insights, interactions, etc.)
Bonus: 0.5 pt for reasonable and meaningful text descriptions / aesthetic choices.

Higher Rates of Hate Crimes Are Tied to Education Inequity

SI 649 Lab 2 Ruotong Gao
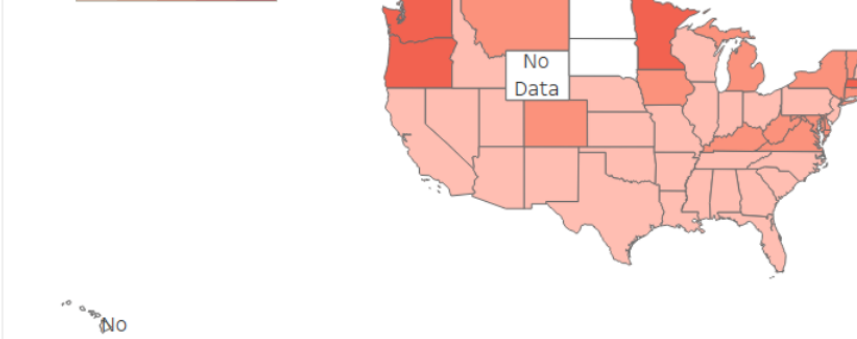
Hate Crimes in the United States

According to dataset published by the UCR program

Hate Crimes Per 100K Residents

0.000 — 1.500

No Data

No

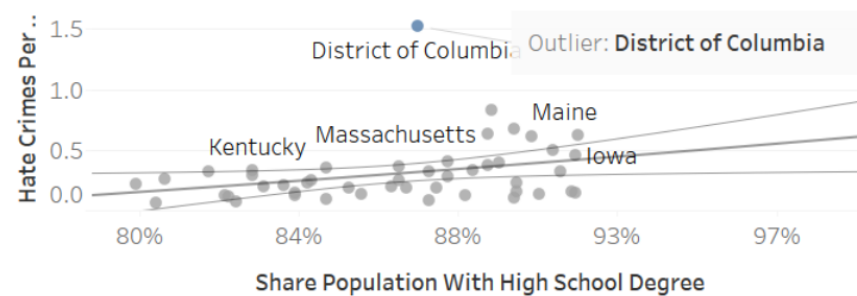## Sample Text Don't Copy

In the 10 days after the 2016 election, nearly 900 hate incidents were reported to the Southern Poverty Law Center, averaging out to 90 per day. In the 10 days after the 2016 election, nearly 900 hate incidents were reported to the Southern Poverty Law Center, averaging out to 90 per day. In the 10 days after the 2016 ele..

Hate Crimes and Population with High School Degree

Hate Crimes Per ..

1.5
1.0
0.5
0.0

Outlier: **District of Columbia**

District of Columbia

Kentucky   Massachusetts   Maine

Iowa

80%   84%   88%   93%   97%

Share Population With High School Degree

*This visualization is based on the article "Higher Rates Of Hate Crimes Are Tied To Income Inequality" on FiveThirtyEight.

Please upload the dashboard to Tableau Public and add the link to this document.