

HANDOUT FOR THE TABLEAU LAB 2

NOTE: This Handout is only for Lab and not for your homework assignment.

Date: 09/16/2024

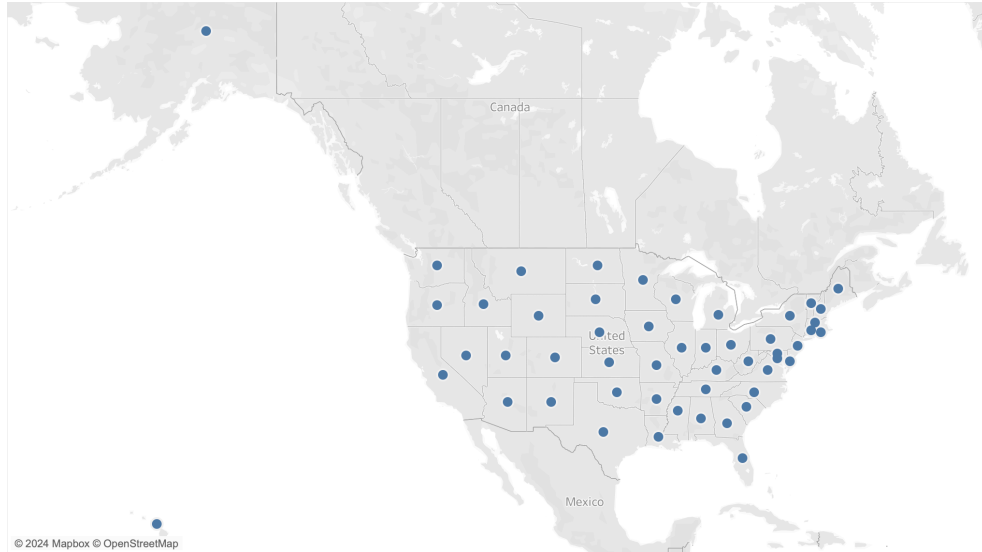
Download data "hate_crimes.csv" from Canvas
Import it to the Tableau using the "text file" option in the left pane.

1. Plotting Map in Tableau Sheet:

1. Drag Longitude into the columns
Drag Latitude into the rows



2. Drag "State" column in to the detail (in marks tab)



4. Styling Maps:

In the top menu, select map → Background maps → select your favorite.

5. In case of any errors like geo-locations not showing up:

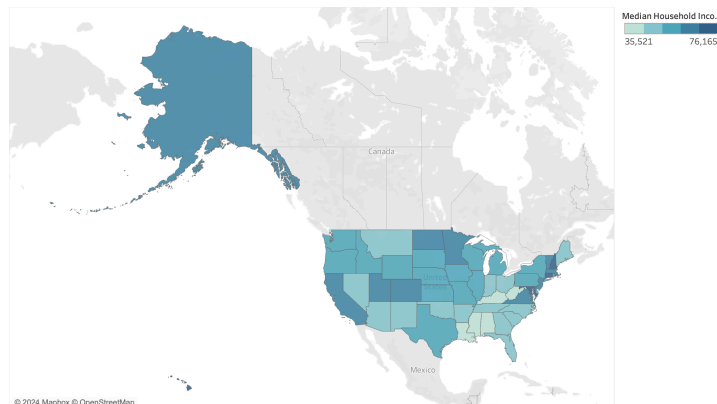
Go to Map → Edit Location → make sure your country/region is set to the United States.

FIRST PLOT:

(PART 1) Median Income of the Households

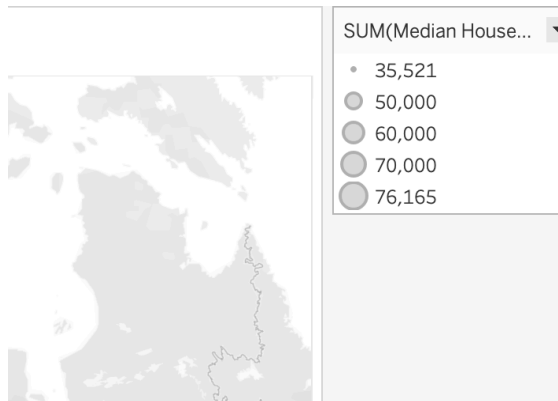
Using Color:

1. Drag Median Household Income into the Color (marks tab)
 - a. To change the color - click on color → edit color → select
 - b. Step color → Specify the number of steps to limit the map to that specific number of colors.

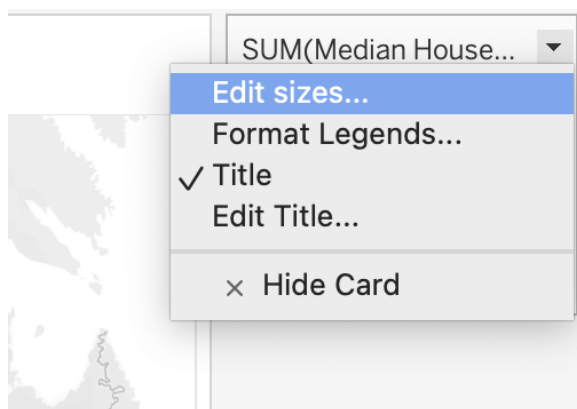


Using Size/Texture:

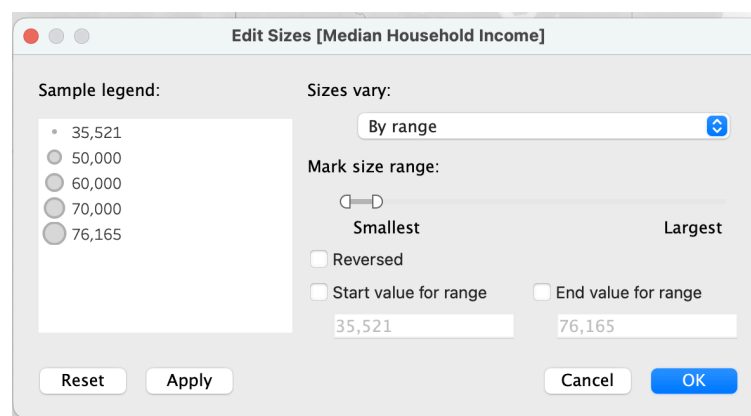
1. Drag Median Household Income into the Size (marks tab)
 - a. To adjust the size: Select the dropdown menu from the card available on the right of the map.



- b. Then select edit sizes.



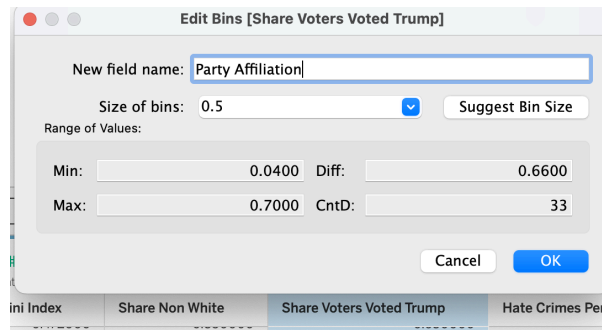
- c. Select “by range” instead of automatically



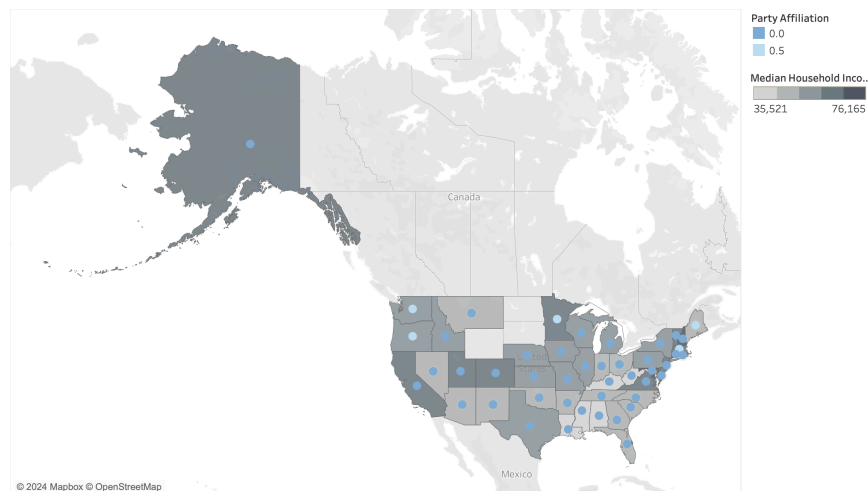
(PART 2) Median household income and party affiliation

For Party Affiliations:

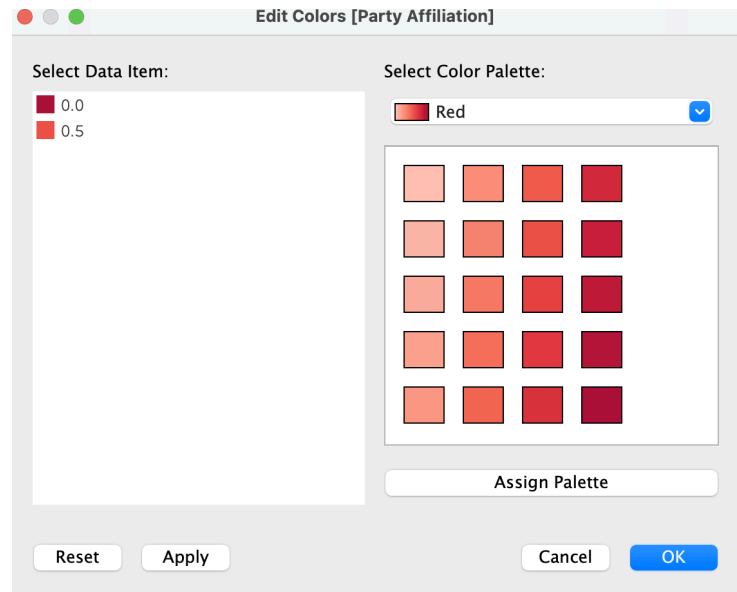
1. Go to the data source
2. Select column named as “share voters voted trump”
3. Click on the dropdown and select “create bins”
4. Change the size of the bins to 0.5
5. Rename it to “party affiliation”.



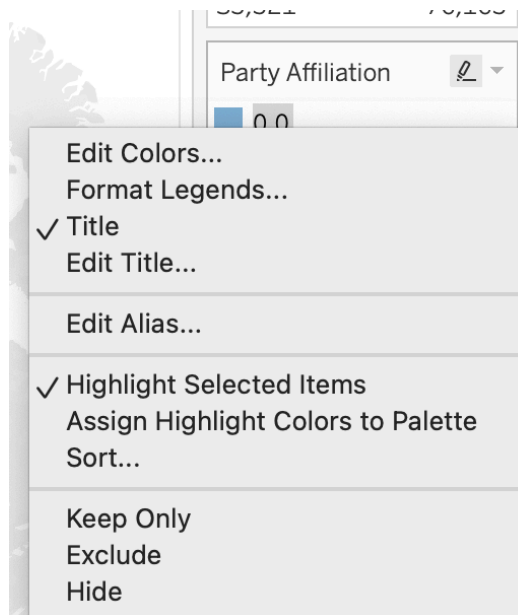
6. Go to the sheets again
7. Drag States and bring it on top of the sheet
8. Add it to the “MARKS LAYER”
9. On the left pane (marks tab) you can now see two layers. Rename them for better understanding.
10. Drag party affiliation and drop it on colors.



11. To change the color:
 - a. Go to the party affiliation card on the right side, and click on the dropdown menu.
 - b. Select edit colors → select the color palette
 - c. Click on the number to assign them colors.

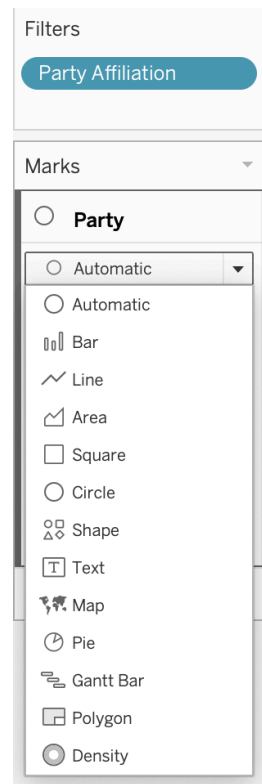


d. To rename the numbers → on the card → select number and right click on it



e. Select “Edit Aliases” and rename it.

12. To change the shape: Click on Automatic in Marks Tab → select shape.



13. To change the shape of party affiliations → drag and drop the column into the shape tab (inside marks tab).

14. Click on Shape again, and assign the shapes to party affiliations.

To change the order of the two layers created:

Drag the layer on top of the other layer

This will bring the background color on top of the shape (not required for this visualization).

Chart 2:

1. Drag “Hate Crimes” into the columns
2. Drag “Gini Index” into the rows
3. Drag “State” into details
4. Drag “Party Affiliations” into the color.
5. To edit the axis:
 - a. Right click on the y-axis → edit axis → exclude 0 (to match the original graph given in the slides).
 - b. Change the title to rename the axis name

- c. Similarly, for x-axis → right click on the axis → select edit axis → select logarithmic scale.

Edit Axis [Hate Crimes Per 100K Spc] X

General Tick Marks

Range

☒ Automatic ☒ Include zero
☐ Uniform axis range for all rows or columns
☐ Independent axis ranges for each row or column
☐ Custom

Automatic Automatic
0.043419610 1.823125823

Scale

☐ Reversed
☒ Logarithmic
☒ Positive ☐ Symmetric

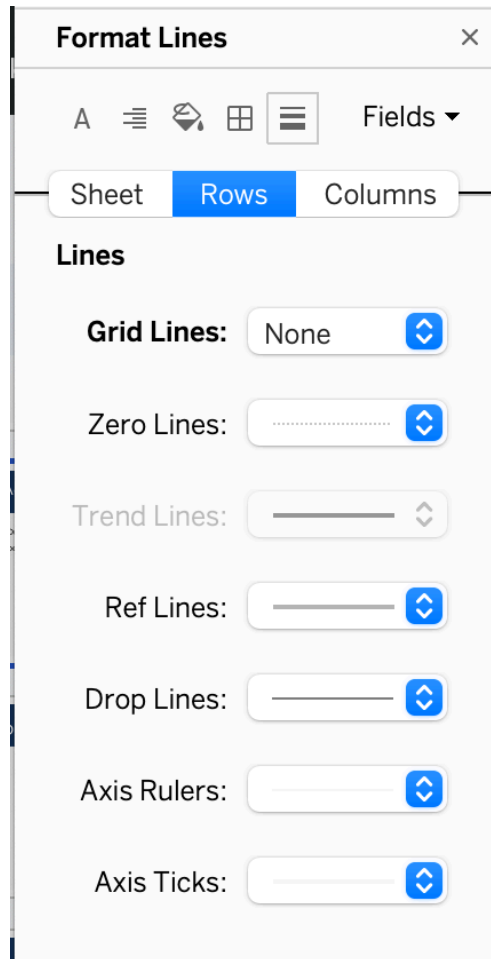
Axis Titles

Title
Custom Hate Crimes

Subtitle
Subtitle ☒ Automatic

↺ Reset

6. Format the chart:
- Right click on the Sheet
 - Select format
 - On the left pane, goto color bucket → Change the worksheet color
 - Go to grid line option (last one in the row)
 - Then select Rows and select Grid Lines to “NONE”.



Creating Dashboard:

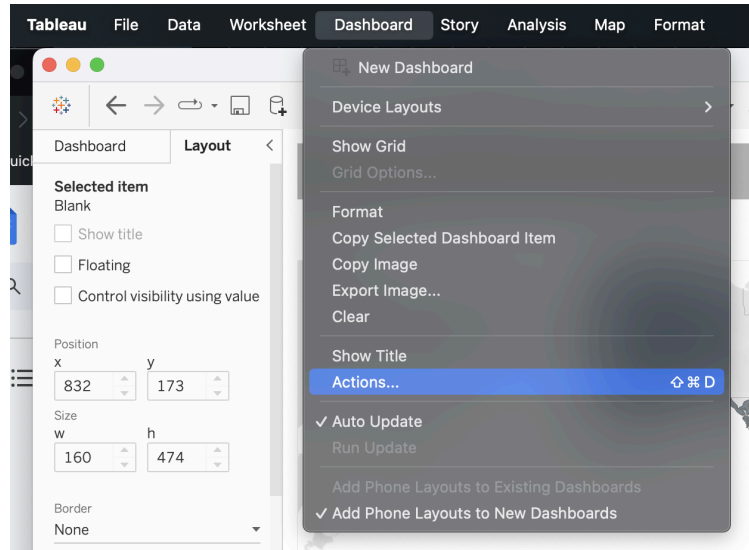
1. Create a new dashboard.
2. Drag Median Household Income to the dashboard
3. Drag Gini Index Vs. Hate Crimes below Median Household Income
4. To align the "Party Affiliation" card on the right:
 - a. From the left pane, select "blank" and drag it above party affiliation card
 - b. Adjust the size



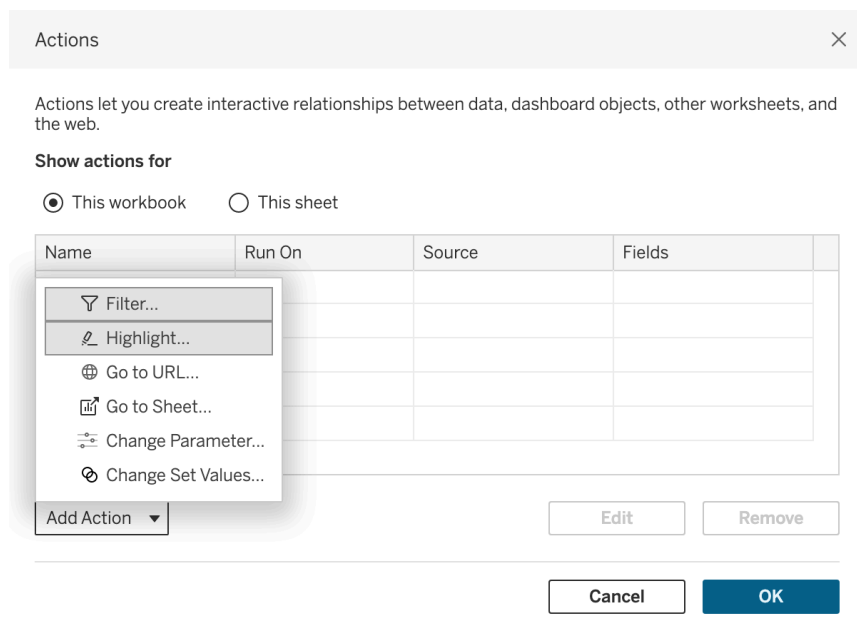
5. Add heading: drag “text” from left pane to the top of chart
 - a. add heading
 - b. adjust the size.
6. Change the background color of the heading:
 - a. Select heading
 - b. On the left pane (in the top) select layout
 - c. Change the background color

Highlight Action:

1. On top menu → Click Dashboard
2. Select Actions



3. Then select Add “Actions” → Highlight



4. Finally, your actions should look like this:

Edit Highlight Action

Name

Highlight1

Insert

Source Sheets

Dashboard 1

Sheet 1

Sheet 2

Run action on

Hover

Select

Menu

Target Sheets

Dashboard 1

Sheet 1

Sheet 2

Target Highlighting

All Fields

Dates and Times

Selected Fields

Party Affiliations

State

Cancel

OK

Actions

Actions let you create interactive relationships between data, dashboard objects, other worksheets, and the web.

Show actions for

This workbook

This sheet

Name	Run On	Source	Fields	
Highlight1	Hover	Dashboard 1	State	
Highlight2	Select	Dashboard 1	State	

Add Action

Edit

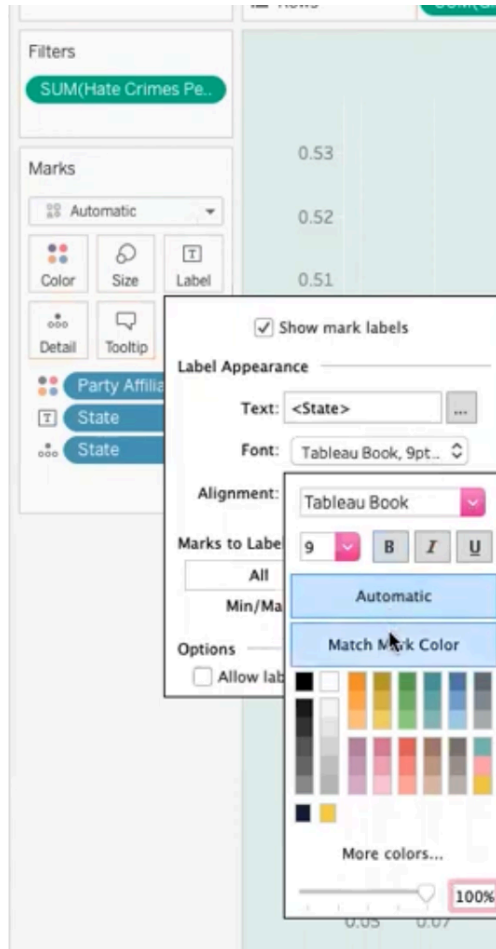
Remove

Cancel

OK

State Labels Only Show When Highlighted:

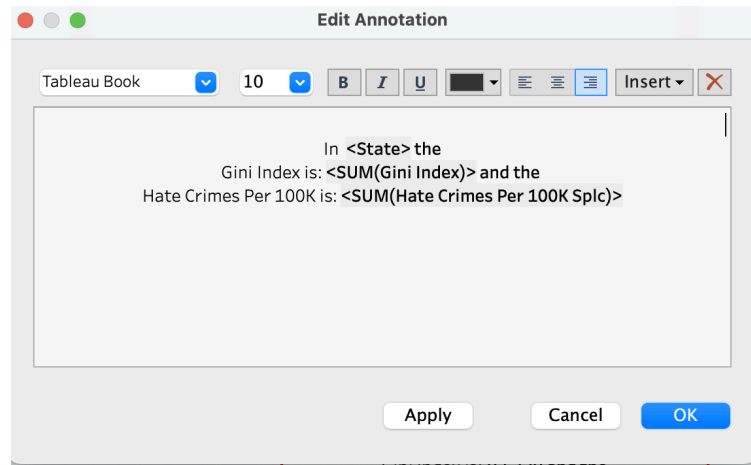
1. Go to the sheet “Gini Index Vs. Hate Crime”
2. Drag State to Labels
3. Click on “Label” → Font → Match Mark Color



4. Then on “Marks to Label” select “Highlighted”

Add Annotations:

1. Go the dashboard
2. Select the point you want to annotate in Gini index vs. hate crime
3. Right click on that point and select “Annotate” → Select “Mark” → Edit the text



4. Repeat the same process for the upper chart.

Publish to Tableau Public:

1. In the most upper menu → Select Server
2. Go to Tableau Public
3. Select “save to tableau public as”
4. Sign in with your credentials
5. If you get an error message:
 - a. Go to Data in top menu
 - b. Select name of your dataset
 - c. Click on extract data
 - d. Click on extract
 - e. Click Save
6. Again, go to tableau public → save as..
7. Give the title
8. Click Save