# **Crime Trends Dashboard Description**

### **Crime Type Checkbox**

What crimes to include in the scatter plots and overall time series. Depending on what is selected, you can find relationships between all crimes, a subset of crime types, or a single crime type.

#### **Select Variables**

There is a linear or log option and a average or sum option. The dropdown menu selects what variable to plot a time series and a scatter plot of that variable versus the total number of crimes committed from selected crimes in the checkbox. The sum option will compute the sum of that selected variable from every selected state. The average option will compute the average of that selected variable depending on what states are selected. The linear/log option changes the scale of the scatter plot so that it is easier visualized when points are clustered.

## **Choropleth map**

Hovering over each state will list the total number of crimes committed depending on what is selected for crime type. It shows how many of each crime contributes to the overall number of crimes for that state. It is heat mapped as well to easily visualize which states have a higher number of crimes committed.

#### **Variable Time Series**

Shows the distribution of selected variables over time averaging or summing each state at each year depending on selected states. There are two time series so that you can compare one variable to another with ease.

#### **Scatter Plots**

Shows the scatter plot of the variable versus the total number of crimes committed based on selected crime types. You can use this to visualize each variable against violent crime, rape, etc individually. You can also use this to visualize each variable against a subset of crimes or all of them. Two scatter plots are included to to able to visualize two variables at once against total number of crimes committed. You can hover over the points to determine what year and state that point is.

### **Select States**

This is a multi-select dropdown menu. Depending on what is selected affects the appearance and results of all visualizations and the table at the bottom.

### **Overall Time Series**

Plots the total number of crimes from selected crimes over time. There is a range slider to select the range of desired years. There is also an 'Input Year to draw line' option to draw a vertical line. This may be helpful in case there are certain years with important events to see before/after effects of the event. For an example, Hurricane Katrina was in 2005. We can draw a vertical line at the year 2005 to indicate this event and easily visualize trends before 2005 and after 2005.

### **Table**

We can filter additional variables and change what data is included in the time series and scatter plots. For an example, filtering median income > 40000 and then visualizing the average number of days in a month of poor mental health versus crimes committed or just the time series of mental health over time.