DSC 106 Final Project: Hate Crimes

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Introduction

We chose this dataset because we are not a fan of hate crimes. Our group feels that hate crimes are a very relevant topic in today's society as they are unfortunately not a rare occurrence. We have learned through our studies at UCSD that data is powerful in telling narratives and understanding trends that may not be immediately obvious. As a result, we feel that by choosing this dataset, we can learn from these previous tragedies to understand and prevent new hate crimes through education. By using geolocation as an attribute we are able to understand which parts of our country do well in its acceptance of diversity and which parts still need improvement.

To deal with the sheer size of our dataset, we have randomly sampled 10% of the data in order to be able to handle it within D3 and properly display it through a web browser. To account for the reduction in size, we have multiplied applicable datapoints by 10 in attempt to keep visualizations as accurate as possible.

Guiding Question

How have hate crimes changed in the United States over the past three decades?

Part A

Frequency of Hate Crimes Since 1991 (Line Plot)

# of Hate Crimes

Year
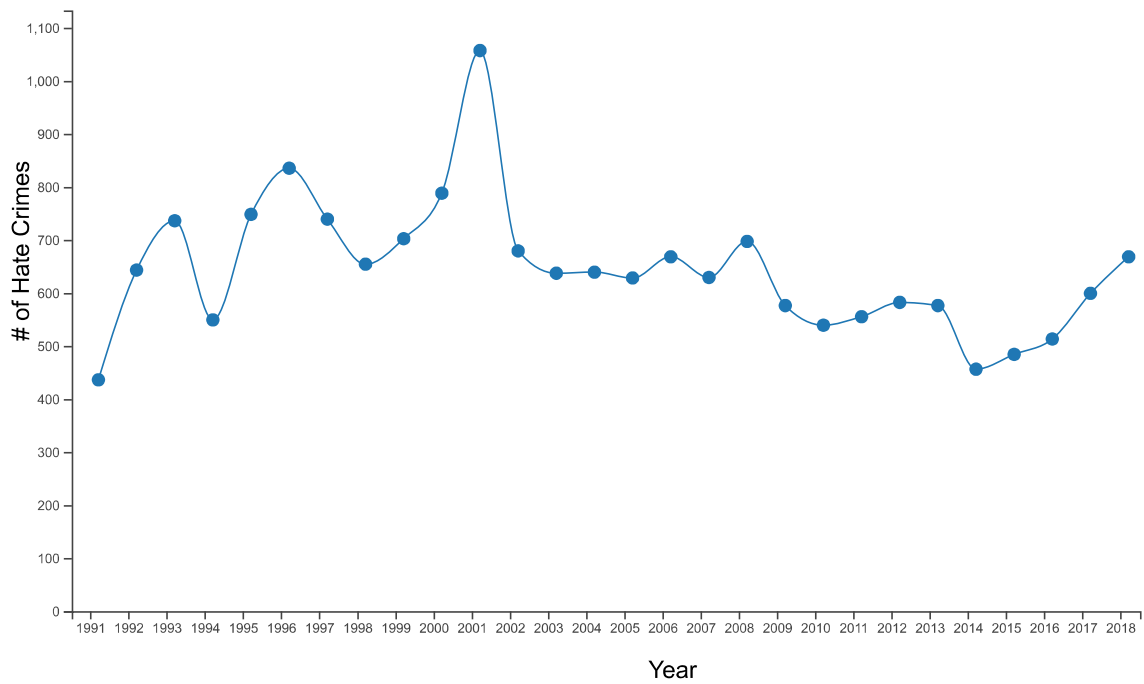
1. **Choice of Color Scheme:** For this plot, we chose a dark blue color because it contrasted well with the light background. Furthermore, as it is a line plot, there are no other colors that are to be used so we do not need to worry about the observed difference between two colors (i.e. red/green for colorblind individuals), thus any single color with enough contrast from the background would have worked.
2.
   - **Marks:** Points, line
   - **Channels:** Position, Tilt (for line between points)

Types of Hate Crimes and Race of Offenders and Victims that are Most Common (Stacked Bar Graph)

◉ Victim Race   ○ Offender Race
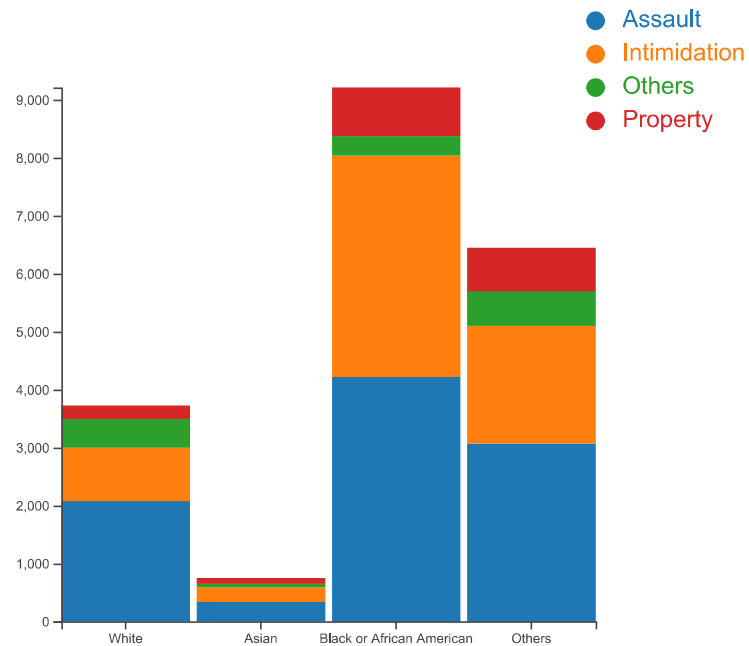
1. **Choice of Color Scheme:** For this plot, we used the built in d3 color scheme. There is no sequential nature to the colors since they are meant to represent groups.
2.
   - **Marks:** Areas
   - **Channels:** Position, Area, Color

Average Count of Offenders Aggregated by City Against the Average Counts of Victims Aggregated by City (Scatterplot)
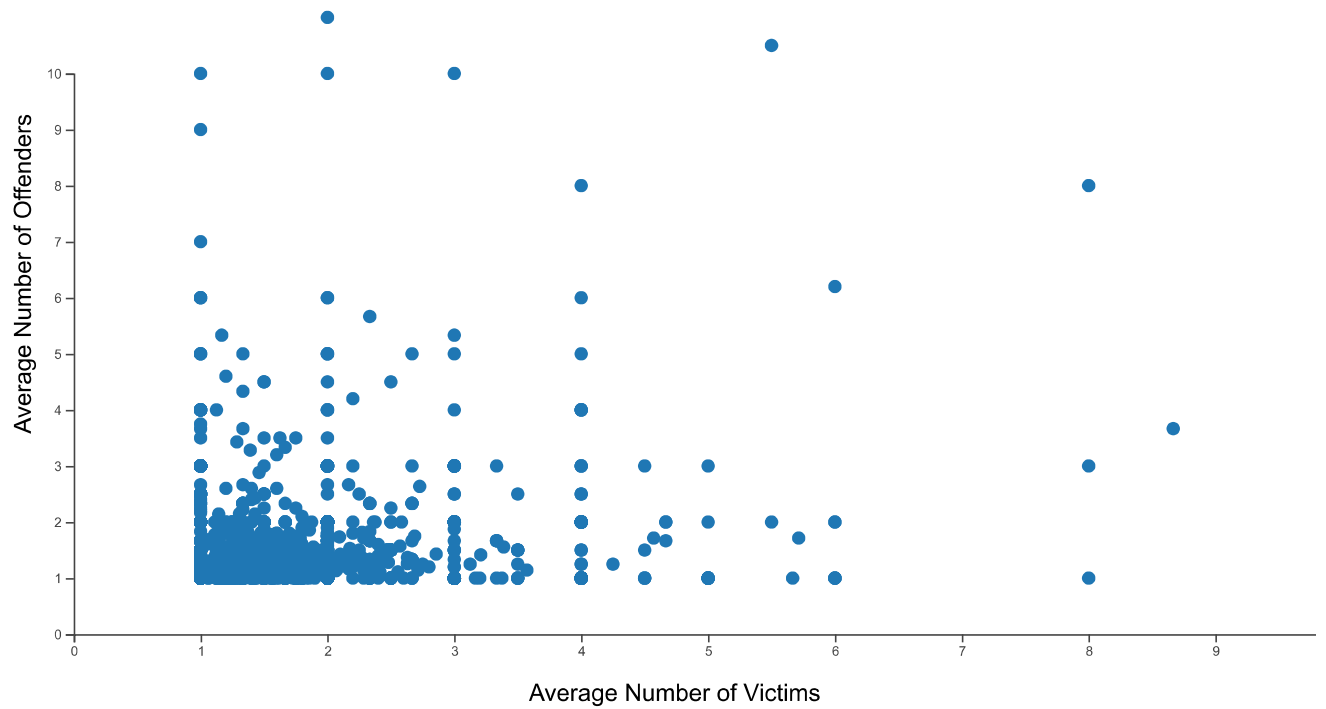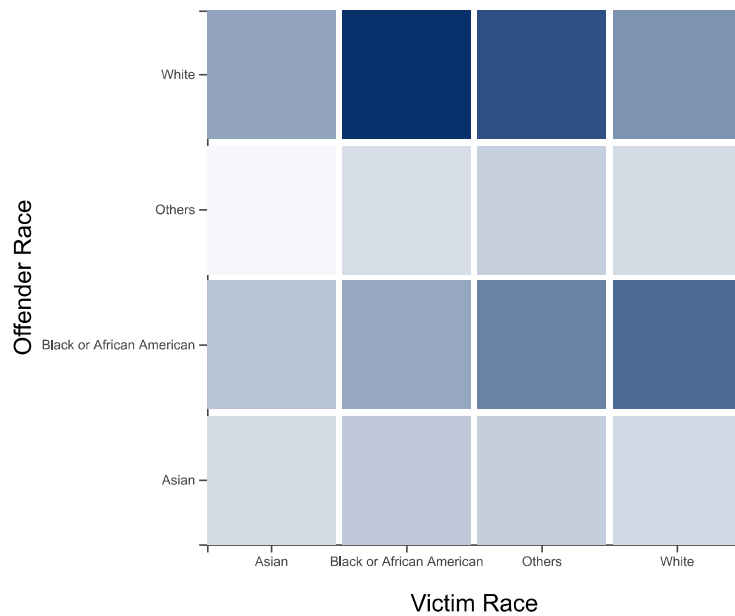
1. **Choice of Color Scheme:** For this plot, we used a single color to represent the data. Blue is a fairly safe color as it is not a common type of colorblindness. Finally the blue provides a nice contrast with the neutral background of the site itself and to the surrounding tiles in the heat map itself.
2.
   - **Marks:** Points
   - **Channels:** Both Horizontal and Vertical position

Count of the Juvenile Offenders and the Regions when they Commit the Hate Crime (Box Plot)
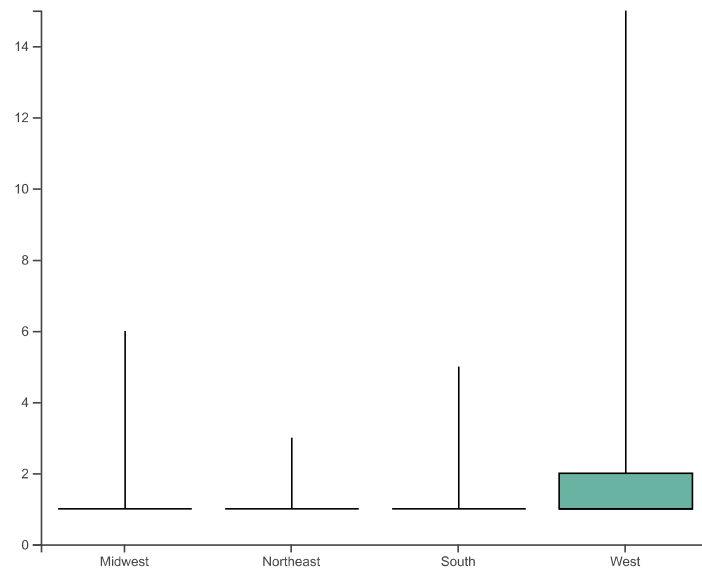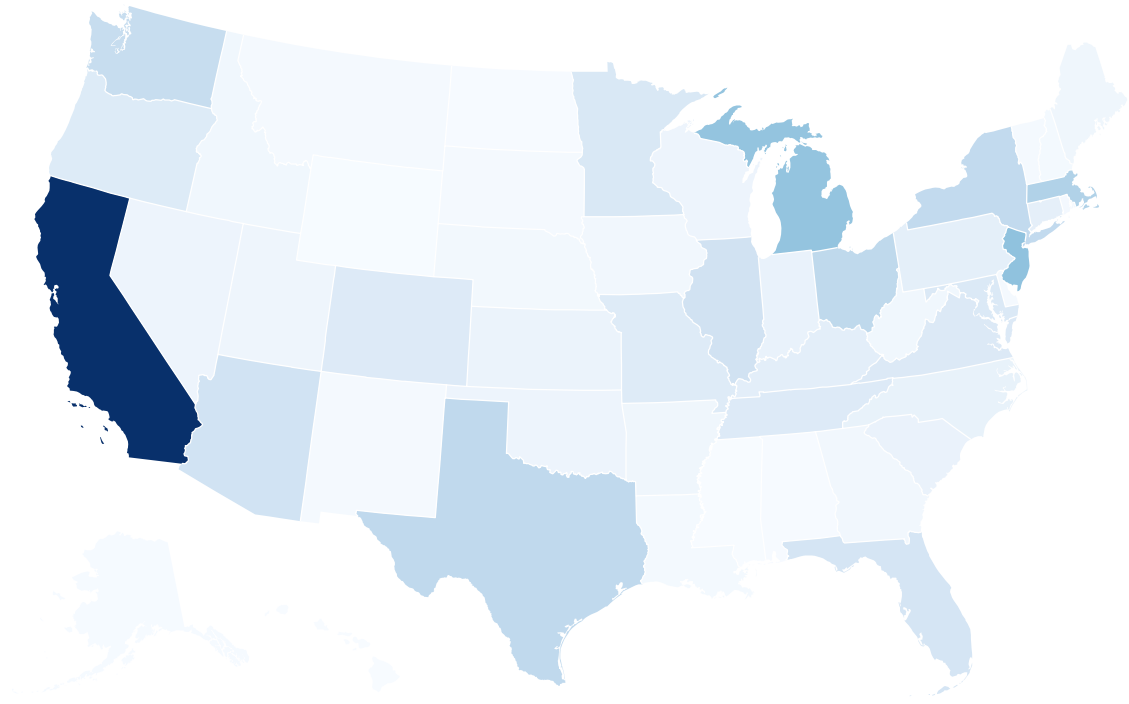
1. **Choice of Color Scheme:** For this plot we used a lighter green to represent the data. Green is a safe color that is not susceptible to color blindness and fits well with the background color. It's a fairly neutral tone that isn't too saturated and easy on the eyes.
2.
   - **Marks:** Area, Lines
   - **Channels:** Both Horizontal and Vertical position, length, area, color

How the Race of the Persecutor of a Hate Crime Relates to the Race of the Victim of a Hate Crime (Heatmap)

1. **Choice of Color Scheme:** For this plot, we used a sequential color scheme with a blue hue to represent the data. Blue is a fairly safe color as it is not a common type of colorblindness. Finally the blue provides a nice contrast with the neutral background of the site itself and to the surrounding tiles in the heat map itself.
2.
   - **Marks:** Area
   - **Channels:** Both Horizontal and Vertical position, Area, Color

Where Hate Crimes Occur in the United States (Choropleth)

1. **Choice of Color Scheme:** For this plot, we also used a sequential color scheme with a blue hue to represent the data similar to the above plot. Blue is a fairly safe color as it is not a common type of colorblindness. Finally the blue provides a nice contrast with the neutral background of the site itself.
2.
   - **Marks:** Area
   - **Channels:** Shape, Area, Color