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| Checkpoint III | Checkpoint III: Visualization Sketch | |
| Group: | <GXX> |
| Date: | <YYYY/MM/DD> |
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# Overview

Overview of the visualization, including the different idioms, showing credibly how they are to work together.

# Visual Encoding

Description of the visual encoding you have selected for each data type, describing for the different idioms, which attributes are represented by which marks/channels.

We decided to use four different idioms for this visualization: a choropleth map, a line chart, a scatter plot, and a dot plot.

The choropleth map is a map of the United States of America divided by states. After the user picks a year and an attribute, the color of each state changes according to the attribute value. The user is also able to interact with the map to pick a state for the other charts to focus on.

The line chart represents the evolution through time of an attribute for a state, both picked by the user. The x-axis represents the year and the y-axis the value of the attribute. The year chosen by the user is highlighted with a dot on the line.

The scatter plot shows the correlation between two different attributes: the main one, chosen for the other plots, and another one that the user can pick from a drop-down menu. The main attribute is represented on the y-axis and the other one on the x-axis. Each dot corresponds to a different year for that same state. There is one case in which the plot represents three different attributes, so the dots are color-coded.

The dot plot shows us a similar perspective as the choropleth map: a visualization by year instead of by state. Each state defines the dots’ position on the x-axis and the dots’ y-axis position depends on the main attribute’s value. For some attributes the dots are color-coded according to the party that governed that state in that year but when we are visualizing students’ grades more dots are shown, each one representing an ethnicity and color-coded accordingly.

# Answering the Questions

## Description of:

## How the idioms provide the means to answer to each of the questions.

## For at least one of the questions, a storyboard showing how several idioms must be used in tandem to provide its answer.