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3300 Project 2

Our drug data came from National Survey on Drug Use from 2012. It had a large amount breakdowns for reported and estimated monthly and yearly use of cocaine, marijuana, illicit drug use, tobacco use, hard drugs, alcohol abuse, and mental health. We used the estimated amount amount within a 95% confidence interval to account for the individuals who did not report their drug habits. We decided to go with the monthly breakdown instead of the yearly breakdown for drug categories because some drugs did not have a yearly breakdown.

The map visualization show two choropleth maps displaying one category each from either illicit drug usage, median income, obesity, hard drug usage, marijuana usage, tobacco usage, alcohol usage, violent crime, or property crimes. Darker colored states correspond to a higher percentage. The percentage/scale for each category changes once the slider changes and is displayed on the right of the graph. The two maps are different colors so that the user can selectively see the comparison between two categories.When you hover over a state, you can see the data breakdown.

The grouped bar chart show the illicit drug usage, obesity, violent crime, and property crime in four regions. We calculated the data of each region by using the population of each state as weight in each category. We sorted the regions by the percentage of drug usage of each group. When you hover over a bar, the percentage of that bar appears.

The bubble chart shows data from each state corresponding to the population's drug usage in the past month, obesity rate, violent rim rate and property crime rate. The size of each bubble corresponds to that state's median income level. The slider controls the visualization of each state's percentage in the chosen metric (such as drug use or obesity). Both axes shift when the slider is moved, and the scale of the y-axis is adjusted according to the percentage of the chosen metric. The x-axis shuffles the position of each state to maintain the negative slope of the graph. Hovering over a bubble reveals the name of the state, percentage of the current metric, and median income level. This functionality was achieved using jQuery and Tipsy tooltip. The chart uses an ordinal scale for the x-axis to display the names of each state and a linear scale for the y-axis that is adjusted based on the minimum and maximum values of the array for each category. The bubbles themselves have a medium opacity setting to be able to distinguish between them.

From our graphs, we concluded that obesity and drug usage have a negative relationship. Additionally there is a slight positive relationship with median income and drug usage. We did not find much of a relationship with property crime or violent crime which could be a because the range of crime is very low.

Data was taken from

http://www.icpsr.umich.edu/icpsrweb/SAMHDA/studies/34933
http://www.census.gov/popest/data/national/totals/2014/NST-EST2014-alldata.html
http://www.fonz.net/blog/archives/2008/04/06/csv-of-states-and-state-abbreviations/
http://www.cdc.gov/obesity/data/table-adults.html
http://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2013/crime-in-the-u.s.-2013/tables/5tabledatadecpdf/table_5_crime_in_the_united_states_by_state_2013.xls
http://www.census.gov/hhes/www/income/data/statemedian/