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Group Module 2

<https://propagating.shinyapps.io/crime-analysis/>

We were curious to see if the race distribution of a police force and the community they serve influence the types of force used in police interactions. This led to the decision to create a frequency plot to demonstrate how much each type of force was used for a set of departments. The departments used in the visualization and analysis are selected by the user through a set of filters. The filters allow a user to select a target race for the department and the population of their community as well as a percentage range, broken into 4 quantiles, that the target race is present in the department or community. For example, a user may select all police departments made up of 25%-50% White officers, serving a community with 50%-75% of the population being Hispanic. The visualization provides the frequency of force used within the filtered set, as well an indicator for the average use of force across all departments (a red dashed line). Additionally, an error bar is included to show a single standard deviation on either side of that average. Below the visualization, a table contains the p-values of multiple two-sided t-tests comparing the average use of each force type to the filtered set, the overall set of departments, and all departments not in the filtered set. Finally, for ease of comparison, the averages and standard deviations are provided for the force types across the same categories (all departments, departments in the filter, and departments outside the filter).