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State Population & Donation Proportion Project

Procedure to Obtain Data

- Imported contact data using a query that filtered only donors in the United States
- Included the fields Primary Address State and Life to Date Giving
- Table 1: Grouped by state and summed up all contacts' Life to Date Giving in a particular state to yield the total donation amount in each state
- Table 2: Grouped by state and provided a count of donors in each state
- Table 3: Researched a table of state populations at <https://www.census.gov/data/tables/time-series/demo/popest/2020s-state-total.html>
- Utilized a merge table to merge Tables 1-3 and include fields Donor Count, Total Amount, and Population by state in one table
- Created custom columns calculating the ratio of Donor Count to Population and the ratio of Total Amount to Population

Analysis and Dashboard

- **State Proportions Dashboard:**
 - **Donor Count & Population Proportions by State:** Provides a secondary axis graph that compares the state populations and state donor counts side by side to detect trends or outlier states.
 - **Analysis:** When comparing the ratios of population to donor count for each state, I noticed that the states MN, ND, NE, and SD are all valued greater than three standard deviations from the mean (in other words, the ratio is not like the others and well above what is expected). This leads to a question of why do these states have more donors than is expected in relation to other states given their population? Factors that could be in play are whether the state is pro-life, whether the state has strong abortion bans, or whether PRI's marketing is better suited or targeted to those areas. No state ratios are below two or three standard deviations from the mean, meaning no states have significantly less donors than expected. This is a healthy sign for the organization because its donor count is not significantly lacking in any particular state in proportion to that state's population.
 - **Donation Amount & Population Proportions by State:** Provides a secondary axis graph that compares the state populations and state total donation amounts side by side to detect trends or outlier states.
 - **Analysis:** When comparing the ratios of population to total donation amount for each state, I noticed that the states AK and MN are all valued greater than three standard deviations from the mean (in other words, the ratio is not like the others and well above what is expected). This leads to a question of why do these states have a higher total donation amount than is expected in relation to the other states given their population? Factors that could be in play are whether the donation amount for each donor is higher than the other states, whether that state has significantly more donors than expected given its population, and whether the GDP is higher in certain states and thus enables them to give more. No states are

below two or three standard deviations from the mean, meaning that no state has a significantly smaller total donation amount than expected with its population. This is a healthy sign for the organization because total donation amounts are not significantly lacking in any particular state in proportion to the state's population.