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Udacity: Marketing Analytics – Data Visualization Project

Question to answer: What are characteristics of our low standard of living population in the United States? Who are they? Where do the majority of them live?

Visual #1: [Income Per Capita \(Bottom 10\)](#)

Summary: The visualization depicts a bar chart that has ordered the states by income per capita. To allow for more granular analysis, the bottom 10 were chosen as the starting focal group of this study, and grouped together within Tableau. Upon inspection, there is a strong concentration of low income per capita in the southeastern region of the United States.

Design: I chose to use a bar chart to quickly and efficiently allow the viewer to see order in the data. Whether looking at greatest or lowest income per capita, it is clear where states fall in line in comparison to one another. The orange coloring was chosen for the bottom 10 performers to draw the viewer's eyes to the subset that we would be focusing on. Colors were not attributed to other states as that would lead to double (an unnecessary) encoding.

Resources: N/A

Visual #2: [Population Living in Poverty](#) + [Population Living in Poverty \[>10.5%\]](#)

Summary: These two visualizations are both map charts filtered to first include our bottom 10 income per capita states. The map is segmented into counties, with colorings for counties representing the percentage of population living in poverty. From the visual, it is easy to see that these states that have already been highlighted as having low income per capita are more prevalently coded orange and living below the poverty line. This means that even though there was a chance that cost of living might have been lower (as it appears to be in Idaho -mainly blue), these other states give us a clearer picture of where our low standard of living population is concentrated in. (Clearly, there are exceptions as this is just a sample of 10 states, however we have further identified areas to focus on)

Design: I chose to utilize mapping features to give the viewer an easier visual to see where our high percentage of poverty population live. The coding was chosen to give colorblind readers a visual that they could interpret, all the while still bring attention to our darker orange counties. The slider in the top allowed me to focus in further on counties that were above 10.5% (national average in 2019 according to Census.gov) for further identification. This slider will also allow users to analyze their own data once we arrive at the dashboard at the end of the story.

Resources: www.census.gov

Visual #3: [Ethnic Category](#)

Summary: This visualization had a filter applied that only included our counties that had greater than 10.5% of their population living below the poverty line. I wanted to know more about the demographics of this subset, so breaking the information down by ethnic category was an appropriate fit. Since there were six different related grouping, a pivot of the data allowed me to create a pie chart that would show users percentages of each ethnic category based of the counties that had been previously selected. As mentioned in the story, it is important to note that the data does not mean that all of the 62.32% of our data set that is Hispanic are all living below the poverty line, or even all living at low income. This is simply a tool used to understand who the audience is within our testing.

Design: I chose the pie chart so that users could easily view segmentation across the different ethnic categories. Making the pie chart being responsive to data previously chosen, users can get better insight on the specific states or counties they are interested in studying in.

Resources: N/A

For a walk through of the data in a concise form, please refer to the story: [Poverty Across USA](#)

To edit and examine your own set of data, please refer to the user dashboard that I created. This dashboard was created using separate sheets to not affect the Story content if a user wanted to go back and review/ compare.

[User Dashboard: Population Drilldown](#)