

## INSIGHTS DRAWN FROM THE CENSUS DATA AND DASHBOARD

The dashboard was created with the census data that was provided. The dashboard created and data used can be found in the folder. The data was cleaned using excel and data cleaning involved:

- Checks for missing data
- Checks for outliers

Presentation was data wrangling and presentation was done using tableau.

### Presentation 1: DASHBOARD FOR USA CENSUS DATA FOR 2015

[https://public.tableau.com/views/TableauPresentation\\_16967795799380/Dashboard1?:language=en-US&:display\\_count=n&:origin=viz\\_share\\_link](https://public.tableau.com/views/TableauPresentation_16967795799380/Dashboard1?:language=en-US&:display_count=n&:origin=viz_share_link)

Information derived from the data and dashboard includes:

#### Most Populated States

**Design:** The map chart was used to show population of the states by using colors, darker colors hint at higher population and lighter hints at lower. This chart was used especially as it easily communicates the geographical location of the states and the associated population.

**Insight derived:** California is the most populated state in the United States of America, with a population of over 38 million and is found in the West. Second most populated is Texas with over 26 million and is found in the South. New York comes third with over

19 million people and is found in the North East. The Mid East region is represented by Illinois and Ohio having over 12 million and 11 million people respectively.

### Population by Gender

**Design:** Bubble chart, chosen for its simplicity, was used as it also shows how population differs from state to the state. By hovering on the state, we can easily see the population difference in terms of numbers.

**Insight derived:** Generally, we observe that we have a higher population of women than men, with women accounting for 51% of the total population and 49% for men. Generally, across the different states this is also observed with the highest difference observed in New York, Florida and North Carolina. Few exceptions to this can mostly be found in the West in states like Alaska, Colorado, Nevada, Utah.

### Unemployment

**Design:** The horizontal bar chart was used to display this as it clearly shows the different unemployment rates. It also allows for textual data to be added to the chart.

**Insight derived:** The average unemployment rate is given as 8.1% with over 23 states having unemployment rates greater than that. Puerto Rico recorded the highest unemployment rate with 19.4% with its closest partner being Mississippi with 12%. The lowest unemployment rate is observed in states that rank in the bottom 20 in terms of population. North Dakota has the lowest unemployment rate with 2.7% and it is followed by Nebraska with 3.3%.

## Citizens and Immigrants

**Design:** The vertical bar chart used employs the use of colors for population encoding, darker colors meaning more population. It also allows better ranking of states using the bars. Upon hovering on the individual bars, we get the information we need about the population of citizens and immigrants neatly.

**Insight derived:** We have the highest count of population being citizens in the California, Texas and Florida. They also have the highest number of immigrants. However, we observed a higher percentage of citizens in Maine, Vermont, West Virginia with 79% of its population being citizens. California, Texas and Utah have the highest percentage of immigrants with 37%, 36% and 36% respectively.

## Income and Income Per Capita

**Design:** The stacked bar chart was used in this case to compare the different income and income per capital values per state. It was used because we can easily compare the figures for the two metrics. It easily shows that in most cases the income per capita has a value equivalent to half of the income.

**Insight derived:** We observe correlation between the income and income per capita of states. The average income is put at \$49,868.3 and the income per capita at \$26,402.6. We have 25 states having average income greater than the national average, we have only 19 states that have greater income per capita. New Jersey, Connecticut, District of Columbia has the highest average income of over \$70,000, with Puerto Rico, Mississippi and Arkansas having the lowest. The highest average income per capita is

also observed in New Jersey, Connecticut, District of Columbia with the lowest in Puerto Rico, Mississippi and Arkansas.

## Presentation 2: COUNTY VISUALISATION

[https://public.tableau.com/views/CountyCount\\_16967925865580/Sheet1?:language=en-US&:display\\_count=n&:origin=viz\\_share\\_link](https://public.tableau.com/views/CountyCount_16967925865580/Sheet1?:language=en-US&:display_count=n&:origin=viz_share_link)

**Design:** The tree map was used as they are generally better to visualize a large number of related categories. Here, the related category is the count of the counties per state.

The tree map allows us have a clear understand of this using colour encoding and text.

**Insight 1:** average county count is 62, with 26 states having counts over 62 counties.

Texas has the highest with 254, and is closely followed by Georgia and Virginia with 159 and 133 respectively.

**Insight 2:** the District of Columbia, Delaware and Hawaii with 1, 3, 5 respectively account for the lowest county count.

## MEAN DRIVE VISUALIZATION

[https://public.tableau.com/views/MeanCommute\\_16967921055070/Sheet1?:language=en-US&:display\\_count=n&:origin=viz\\_share\\_link](https://public.tableau.com/views/MeanCommute_16967921055070/Sheet1?:language=en-US&:display_count=n&:origin=viz_share_link)

**Design:** The bar chart was used to show the average mean commute time for each state. It clearly showed the data, allowing for highlighting with relevant textual data.

**Insight 1:** average national mean commute time is 23.3 minutes. We observe from dashboard, a varied mean commute time for the different states. The highest commute time is observed in the states of the District of Columbia, New Jersey and Maryland. This can be because these states also have the highest rate of people moving by transit.

**Insight 2:** the states of Kansas, Alaska and South Dakota have the lowest mean commute time of 18, 11, 17 minutes. They also have one of the lowest amount of people travelling by transit.