

## TABLEAU FINAL PROJECT

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**Course:** Data Analysis Advanced [Udacity/ITIDA]

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### Visualization 1: Which states have more women than men?

<b>Link</b>	<a href="https://public.tableau.com/app/profile/khaled.atya/viz/PercentageofWomenperState/WomenPercentage">https://public.tableau.com/app/profile/khaled.atya/viz/PercentageofWomenperState/WomenPercentage</a>
<b>Summary</b>	<ul style="list-style-type: none"><li>• This viz shows a bar plot of the average women percentage per state.</li><li>• There are 27 states with more women than men. The District of Columbia has the highest women to total population percentage of 52.636%.</li></ul>
<b>Design</b>	A bar graph was used to plot the average women percentage to total population per state since it was easy to identify the states with more women than men by ranking the bars from largest to smallest and conditionally coloring the bars that represent a value higher than 50%. Pink and blue were used to represent females and males as they are socially associated with these genders. These two colors are also color-blind friendly.
<b>Resources</b>	N/A

### Visualization 2: What transportation method is correlated with higher income?

<b>Link</b>	<a href="https://public.tableau.com/app/profile/khaled.atya/viz/TransIncomeCorr/Story1">https://public.tableau.com/app/profile/khaled.atya/viz/TransIncomeCorr/Story1</a>
<b>Summary</b>	<ul style="list-style-type: none"><li>• This is a story composed of bar and scatter plots of the average percentage per state for each transportation to work type versus income with trend lines to show correlation between transportation type and income.</li><li>• Going to work via public transportation has the highest positive correlation with income compared to driving own car, carpooling, and walking.</li></ul>
<b>Design</b>	<ul style="list-style-type: none"><li>• To generate trend lines, scatter plots were used.</li><li>• Negative trend lines are formatted with a red color while positive trend lines are formatted with a green color.</li><li>• A story is used to guide the viewer to our result which I see a better option in this case compared to dashboards.</li></ul>
<b>Resources</b>	N/A

### Visualization 3: Income per Capita & Ethnic Distribution

<b>Link</b>	<a href="https://public.tableau.com/app/profile/khaled.atya/viz/IncomeperCapitaEthnicDistribution/IncomeperCapitaEthnicDistribution">https://public.tableau.com/app/profile/khaled.atya/viz/IncomeperCapitaEthnicDistribution/IncomeperCapitaEthnicDistribution</a>
<b>Summary</b>	<ul style="list-style-type: none"> <li>• This is a dashboard composed of 3 bar plots and a map to show the ethnic distribution and income per capita for each county.</li> <li>• District of Columbia located on the east side of the USA has the highest average income per capita of 47,675 USD. Most of its residents are black (48%) and white (35.6%).</li> </ul>
<b>Design</b>	<ul style="list-style-type: none"> <li>• Bars are used to show the income per capita for states and counties since they work best with categorical data and easily allow us to identify the states and counties with the largest income per capita.</li> <li>• A map is used to show the state and the different counties within it. It allows us to visually see the location of each state and the different counties and their locations within each state.</li> <li>• Bars are again used to show the percentage of each ethnic category allowing us to visually understand how these categories are distributed for each county selected.</li> <li>• The user can filter all plots using the states bar plot (top left). Using the county plot (top right), the user can filter the map and the ethnic distribution plot.</li> <li>• The total population and average unemployment rate are displayed as tooltips in the states bar plot (top left).</li> <li>• All plots are displayed together using a dashboard.</li> </ul>
<b>Resources</b>	N/A