

## **Insight A**

### **Which states have the best transportation? (Based on commute times)**

In my opinion, States with the least mean commute times should have the best transportation.

The **District of Colombia** has the lowest mean commute time.

<https://public.tableau.com/app/profile/woolongs/viz/FinalProject-PovertyLevelsAcrossTheUSA/Story1?publish=yes>

***I used an ordered Bar Chart because of the ease of comparing lengths visually. It's ordered from least to greatest to easily highlight the State with the lowest mean commute time.***

But why?

Is it due to its relatively small land mass or is it due to its population size? Is there a relationship between mean commute time and population size and land mass?

The top 10 states with the lowest commute times and their land mass is shown in the second slide, with a scatterplot and trendline revealing a relationship between the population and mean commute time.

<https://public.tableau.com/app/profile/woolongs/viz/FinalProject-PovertyLevelsAcrossTheUSA/Story1?publish=yes>

***I used a map here to help the reader visualize land mass and a scatter plot with a trendline to help detect any relationship between the two supposedly unrelated variables. I used a Red color scheme as I believe a varying shade of red visually highlights change the best.***

Based on the trendline, there's a strong positive relationship between population size and mean commute time. It looks like the more populated the state, the higher the commute time. The State of California is an outlier and when we drill down, Los Angeles stands out several points away from the trendline. I can't seem to determine what's makes Los Angeles the outlier.

## **Insight B**

### **How does income and poverty look across America?**

The top 10 states with the highest poverty rates are mapped on the story.

<https://public.tableau.com/app/profile/woolongs/viz/FinalProject-PovertyLevelsAcrossTheUSA/Story1?publish=yes>

***I used a Map here to help the reader visualize location and help detect if certain parts of the USA are more prone to poverty. It helps to answer questions such as, Is the East Coast affluent and the South more impoverished? The ability to compare data geographically allows to viewer to see patterns on a high level. I used a Red color scheme as I believe a varying shade of red visually highlights change the best especially for dire topics like Poverty. It helps to highlight the need to take action. The combined Bar Chart allows the viewer to see the change in poverty levels from state to state in length, giving the user a more quantitative understanding of the degree of poverty level***

How does income look across the country and does it have any correlation with poverty rates?

<https://public.tableau.com/app/profile/woolongs/viz/FinalProject-IncomevPovertyLevelsState/Sheet3?publish=yes>

***I used a scatter plot here to help determine if there's any relationship between two variables that appear to be unrelated.***

From the link above, we see a positive relationship between income and poverty rates i.e. more money more problems but all jokes aside, I interpreted this as proof of a huge disparity between the rich and the poor on a State level where the extremely rich skew the data.

When we drill further to the more granular county level, we see a completely different story.

<https://public.tableau.com/app/profile/woolongs/viz/FinalProject-IncomevPovertyLevelsCounty/Sheet3?publish=yes>

***I used a scatter plot here to help determine if there's any relationship between two variables that appear to be unrelated. Drilling down provides more data points that tell a much more accurate story.***

This is more accurate as it shows a negative relationship between income levels and poverty levels, with Maricao, Puerto Rico is the poorest county in the USA.

### **Insight C**

#### **Down the rabbit hole?**

At this point, I'm extremely curious to see what drives poverty levels. The most obvious is unemployment.

<https://public.tableau.com/app/profile/woolongs/viz/FinalProject-PovertyLevelsUnemploment/Sheet6?publish=yes>

***I used a scatter plot here to help determine if there's any relationship between two variables that appear to be unrelated.***

This visual explains why certain areas have high poverty rates, no employment, no income to finance a good life.

I'm now curious to see if certain demographics are relatively poorer than other demographics.

<https://public.tableau.com/app/profile/woolongs/viz/FinalProject-PovertyLevelsDemographics/Dashboard3?publish=yes>

***I used a scatter plot here to help determine if there's any relationship between two variables that appear to be unrelated.***

Based on the scatter plot and trendline, the following was apparent:

White, Asian and Pacific neighborhoods tend to be relatively richer than Hispanic and Black neighborhoods. But is there a relationship between income and demographics? Does one demographic earn more than others.

<https://public.tableau.com/app/profile/woolongs/viz/FinalProject-IncomeLevelsDemographics/Dashboard3?publish=yes>

***I used a scatter plot here to help determine if there's any relationship between two variables that appear to be unrelated.***

The above scatter and trendline shows White, Asian and Pacific neighborhoods earn more than Hispanics and Blacks.