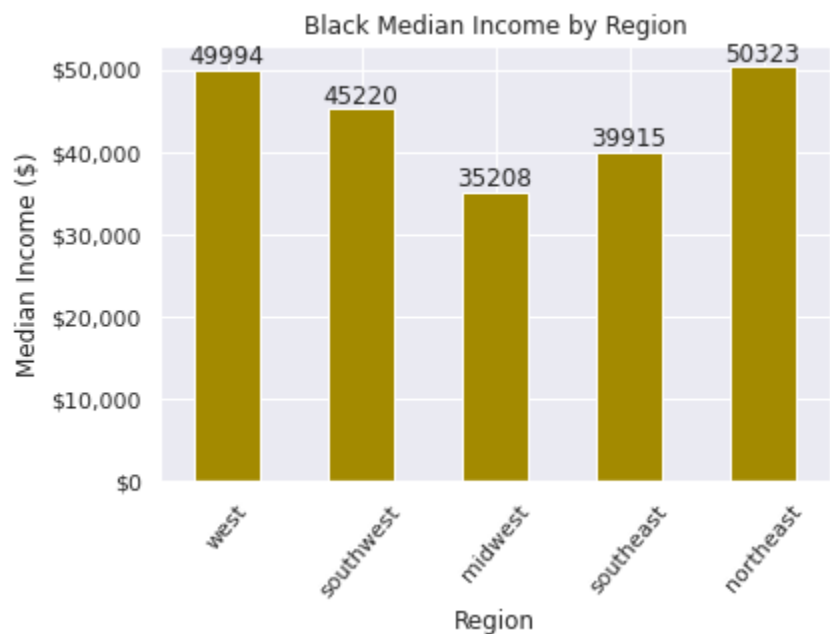


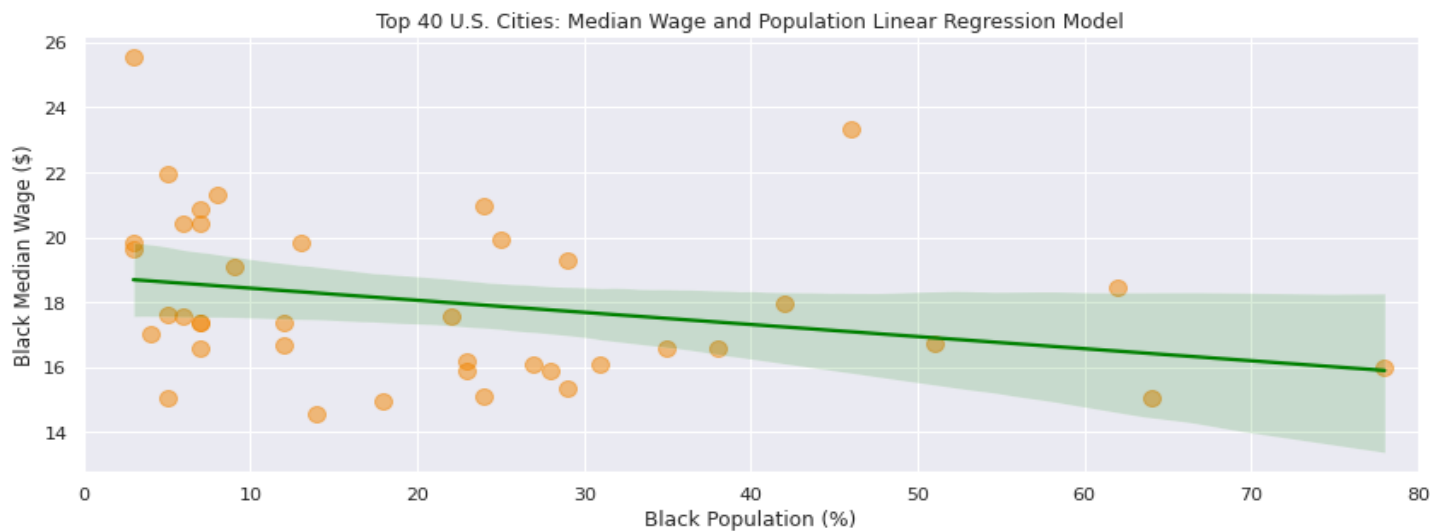
Statistical Analysis



Black Demographic: Population, Median Wage and Education

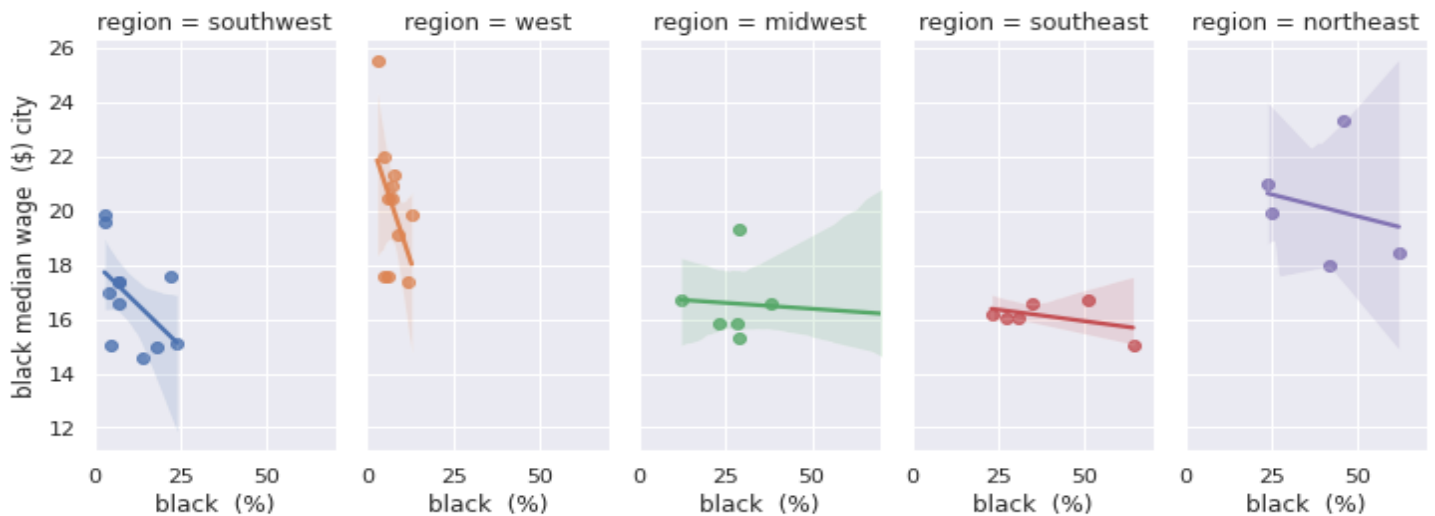
Looking solely at population demographics would not be enough to determine earning potential in a location. The West, with the lowest population of Black people, has the second highest earning potential, while the Northeast, with the highest population of Black people, has the highest earning potential. If one's desire was to be in a high earning location with a high population of Black people, the Northeast appears as the best region to consider when relocating, but we'll

need to take a closer look to gather some more insight.

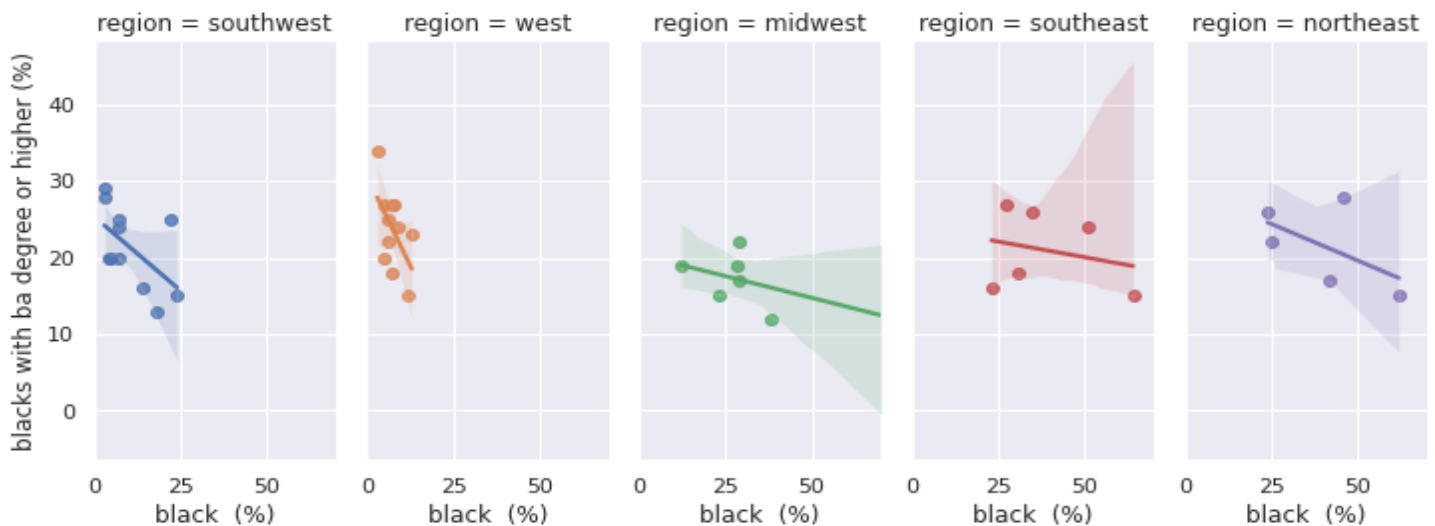


- The most interesting insight we found when using linear regression to find the trends between Black population size and median wage, and Black population size and the number of people who have a BA Degree is that as the population increases, both the median wage and the number of people who have a BA Degree or higher decreases.
- Looking at this, we could infer that a low population of Black people is indicative of a higher median wage for this demographic, but as we can see that many of the cities fall outside of the confidence interval shown in the shaded area.

Black Median Wage and Population Trends by Region



Black BA Degree or Higher and Population Trends by Region

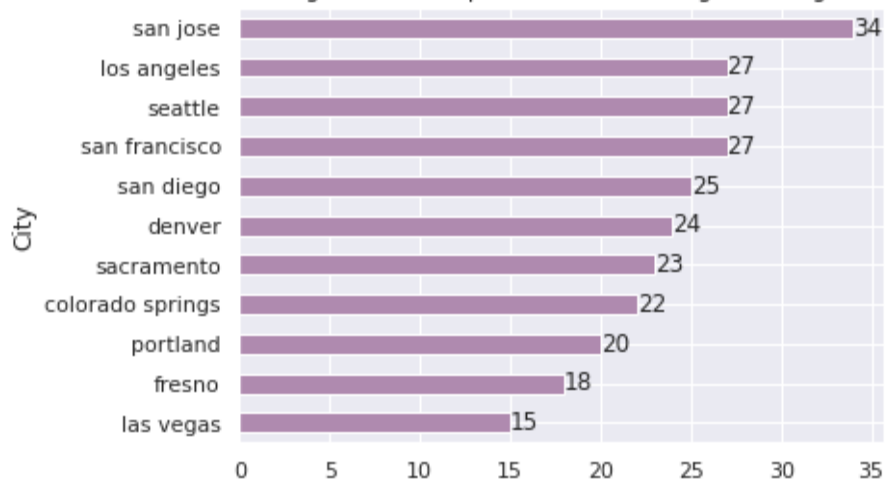


- We decided to break down the cities by region to get more clarity on the general trend and found that the West and Southwest had the most statistically significant negative correlation between population and median wage, and population and having a BA degree or higher.
- Even though the cities with the lowest population show higher earnings, the Northeast region, which has the highest median income for Black people, also has the largest Black population.

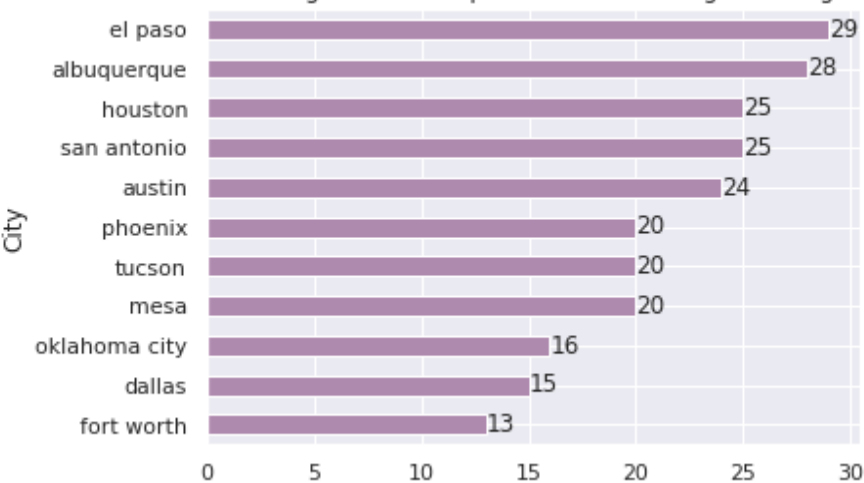
West and Southwest Region: Black Median Wage and Population Size by City



West Region: Black Population with BA Degree or Higher (%)



Southwest Region: Black Population with BA Degree or Higher (%)



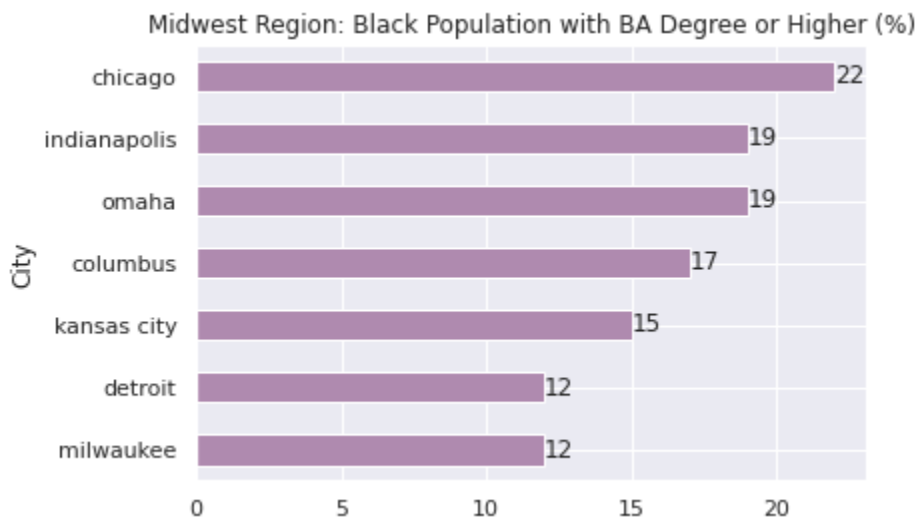
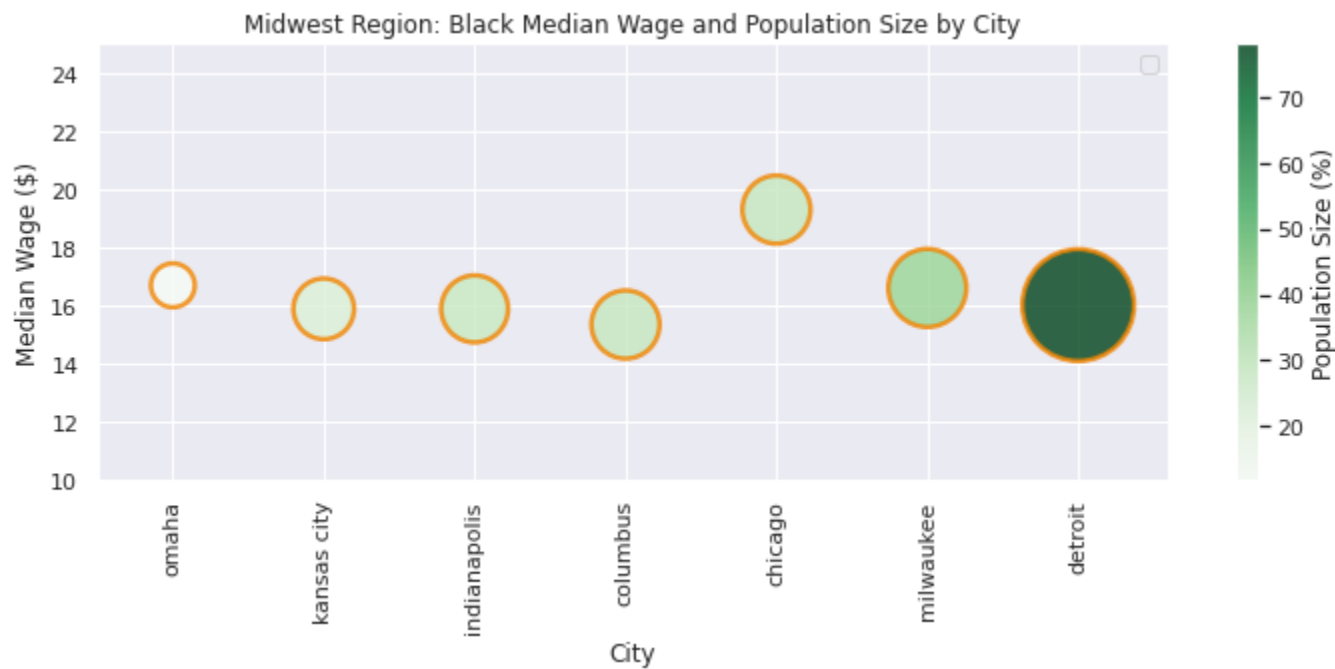
- We decided to use a bubble plot to show the interaction between median wage and population size in each city. First we looked at the West and Southwest, the regions with the lowest population of Black people.

- San Jose has the highest median wage in the West, with 34% of the Black population having a BA degree or higher. For this reason, we might conjecture that having a BA degree increases earning potential across the board, however, Fresno has the third highest median wage in the West, but only 18% of this demographic has obtained a BA degree or higher.

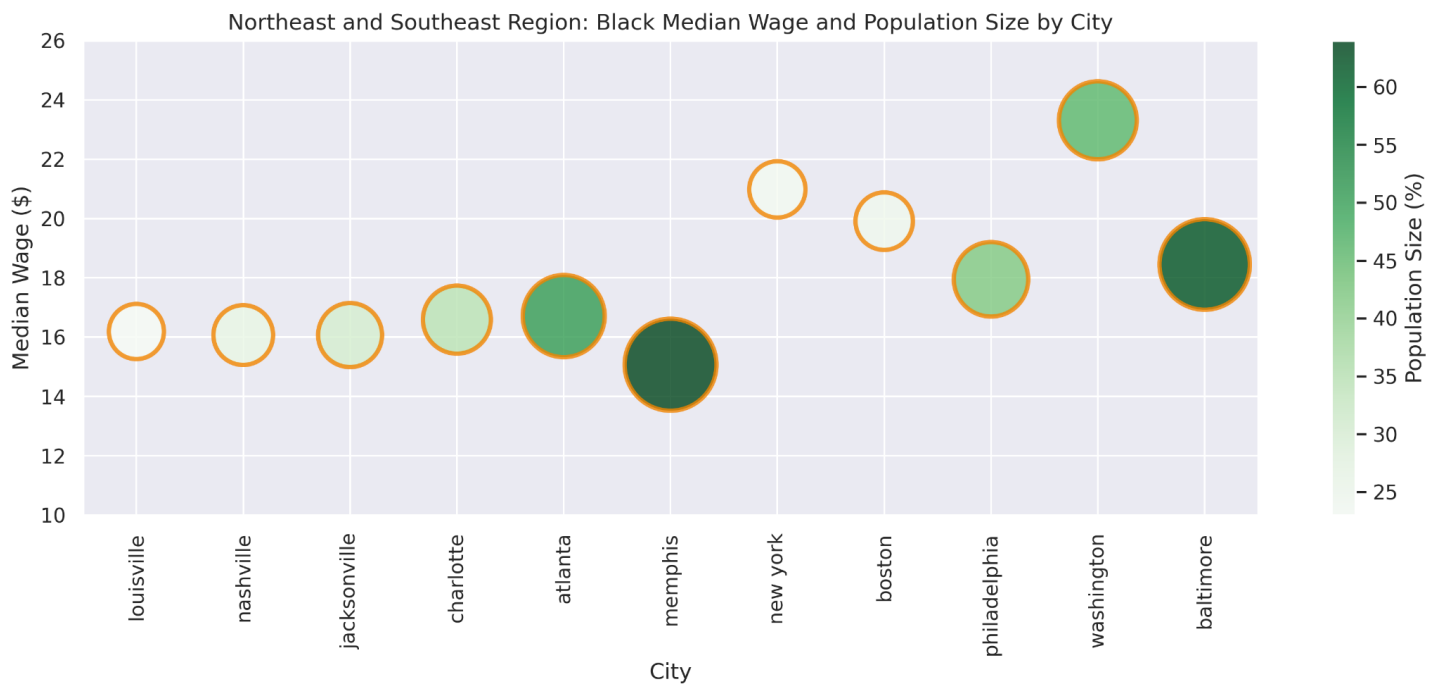
- In the Southwest, the three cities with the highest median wage also have the highest percentage of Black people with a BA Degree or Higher, while the cities with the lowest

median wages have the lowest percentage of Black people with a BA Degree or higher. This could explain why

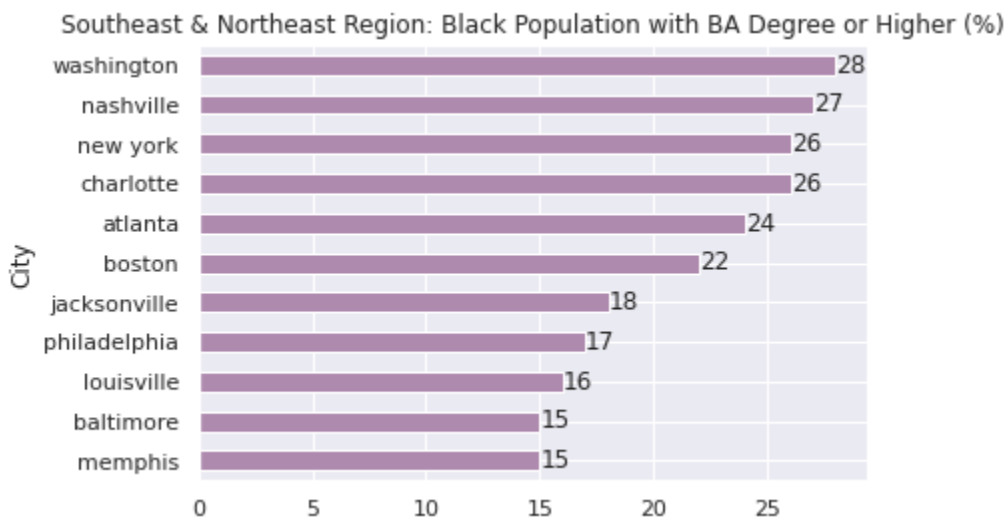
Houston does not follow the trend seen in this region. Having a BA Degree or higher seems to hold more weight in the Southwest than in the West.



In the Midwest, as the Black population starts to increase, the median wage decreases until it gets to Chicago, the city with the highest median wage for Black people in this region. Looking at the bar chart, we also see that this city has the highest percentage of Black people with a BA Degree or higher, so this could explain why the median wage is higher. The median wage starts to decrease as the population size starts to increase again after Chicago.



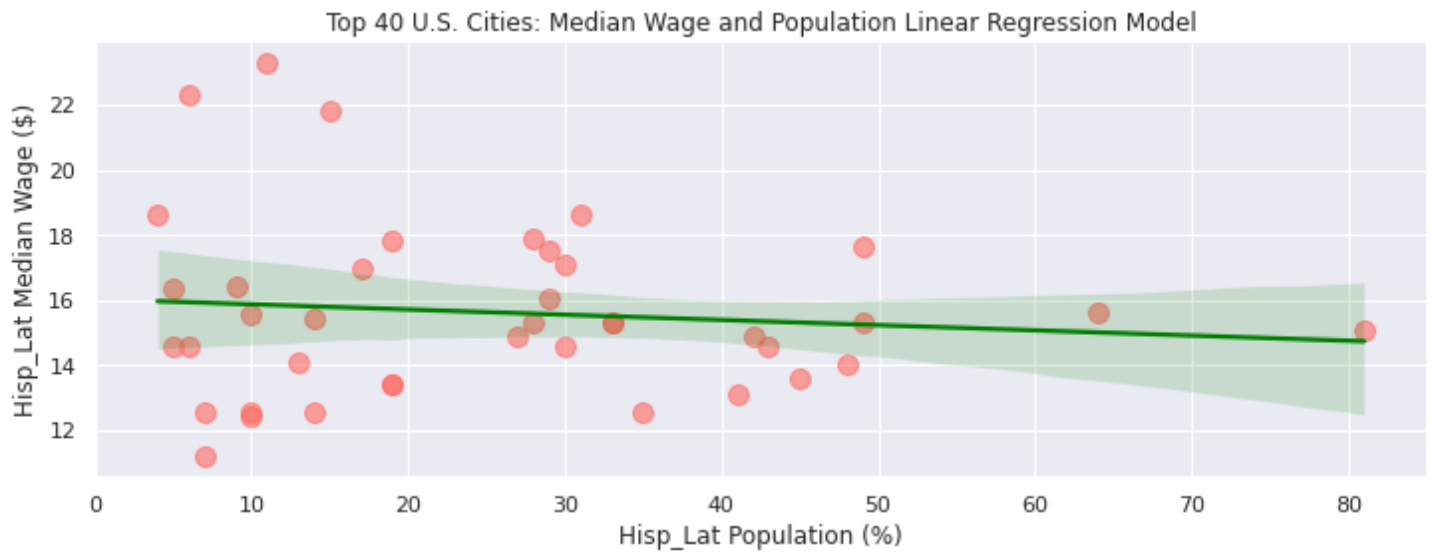
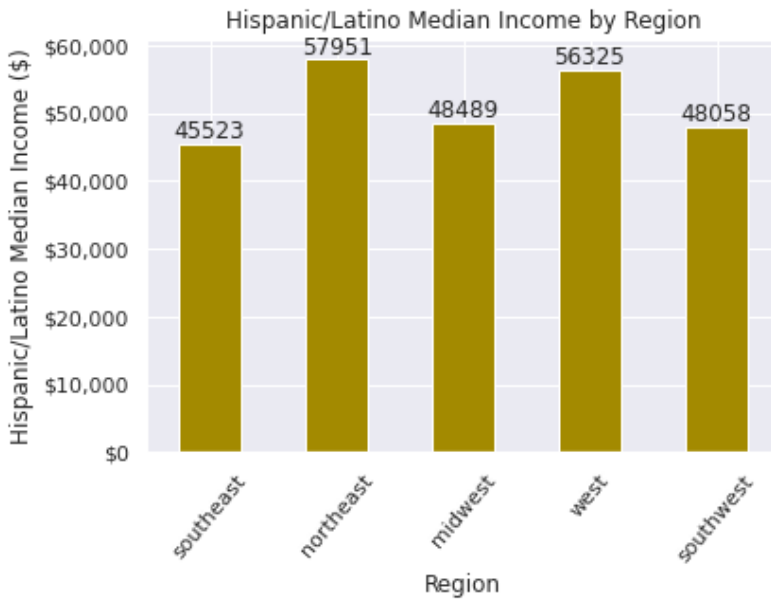
The Southeast and Northeast have the largest population of Black people, and similar to what we saw in the West and Southwest, there's a noticeable difference between the median wage in each region, but having a BA Degree does not seem to be the distinguishing factor. There's a slight increase in median wage as the Black population in Southeast cities increases, but it takes a noticeable drop in Memphis where the Black population is the largest and the median wage is the lowest.



Washington D.C. appears to be the most favorable city for Black transplants who are high earners and desiring to live in a community with a large population of other Black people who are as well. This city also has the highest number of Black people with a BA Degree or higher, so this could be an important factor to take into consideration for those wishing to relocate here.

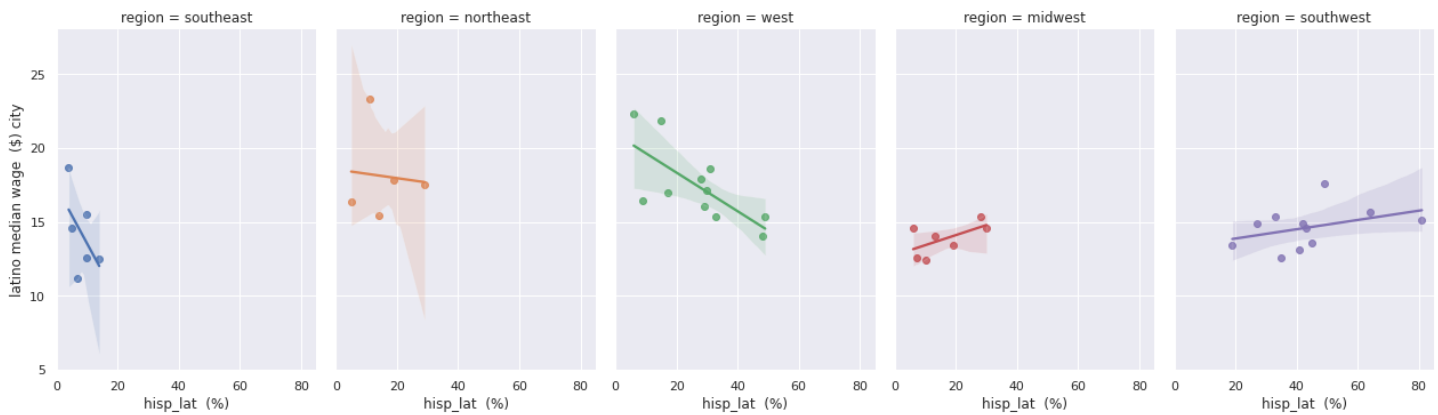
Hispanic and Latino Demographic: Population, Median Wage and Education

For Hispanics and Latinos, their highest earning potentials are in the West and Northeast as well, only the Northeast is where their population is one of the lowest. For this demographic, population may not be the best indicator of success when considering relocation.

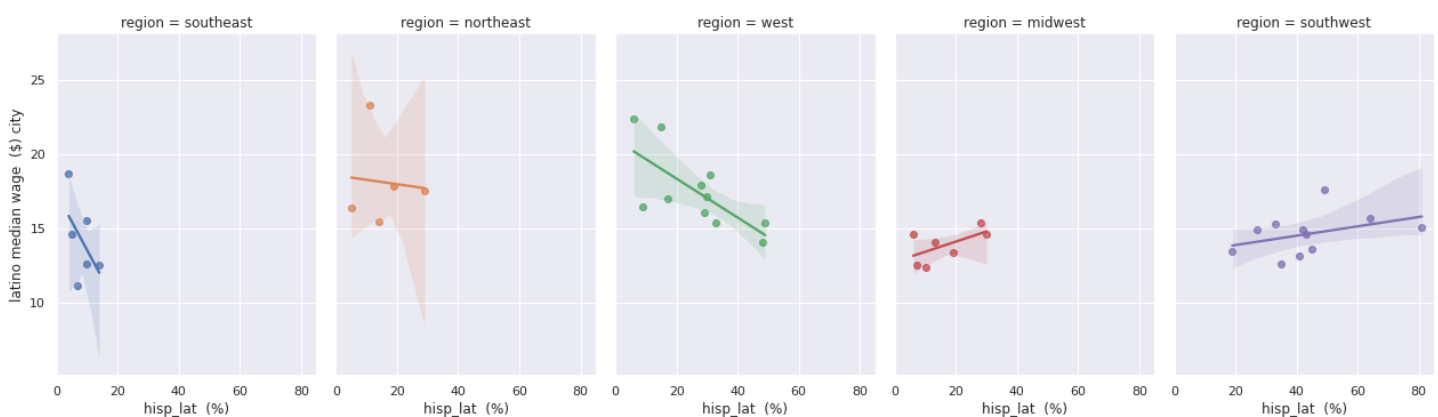


- For Hispanic and Latino people, the trend between median wage and population percentage is not as clear, but we do see that the cities with the highest median wage for Hispanic and Latino people have the lowest population.
- There is a more clear downward trend when looking at the relationship between population and number of Hispanic and Latino people who have a BA Degree or higher.

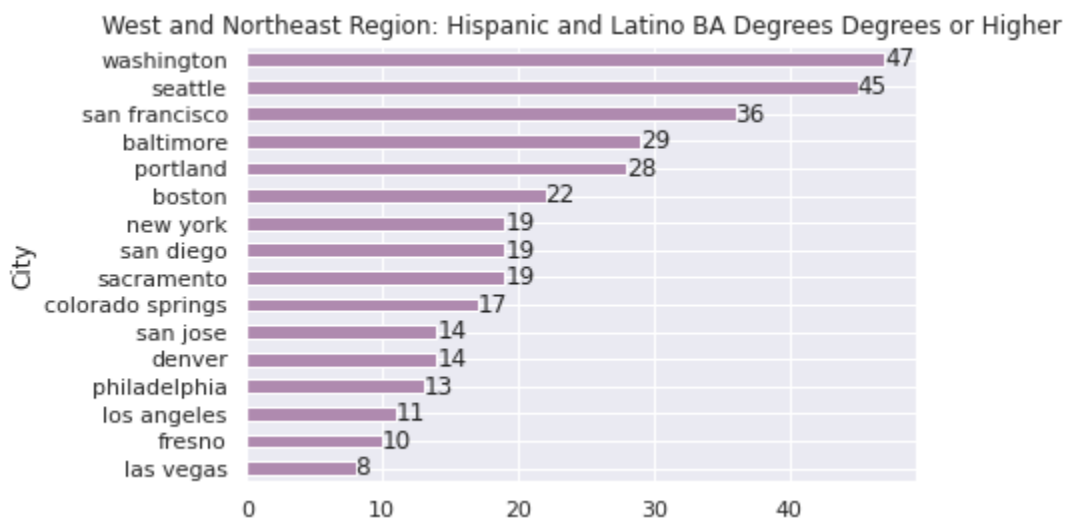
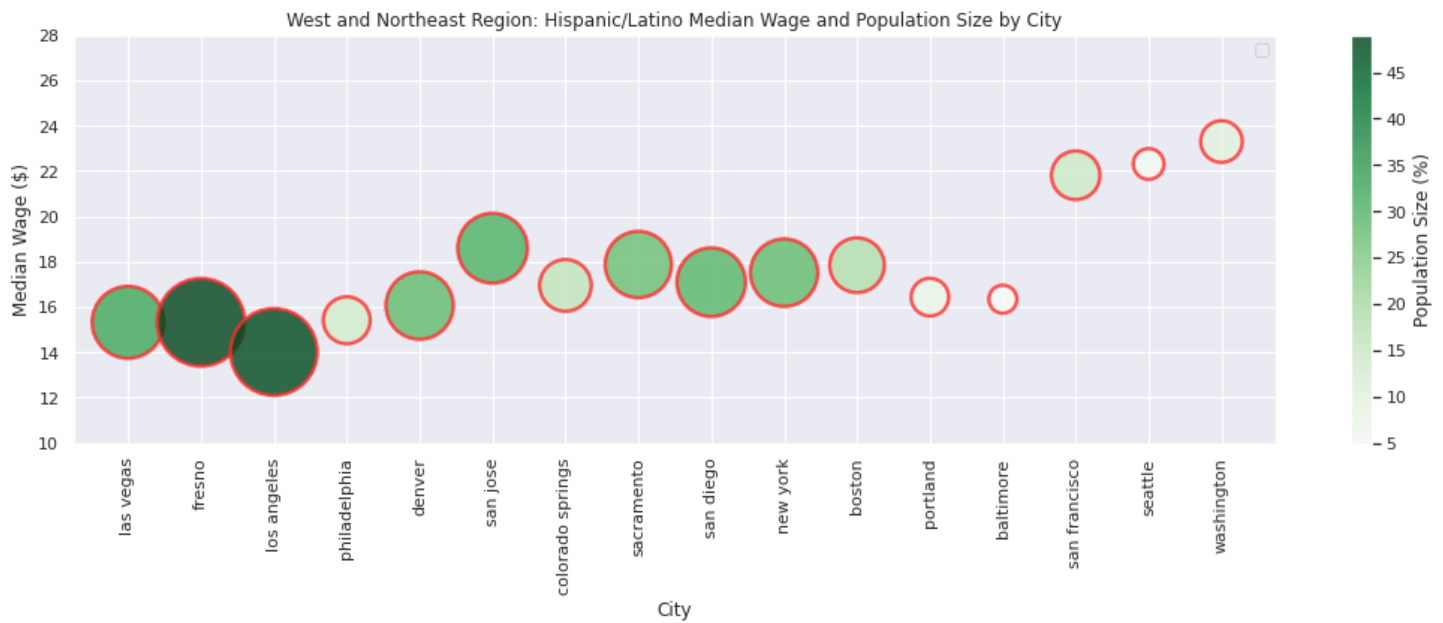
Hispanic/Latino Median Wage and Population Trends by Region



Hispanic BA Degree or Higher and Population Trends by Region

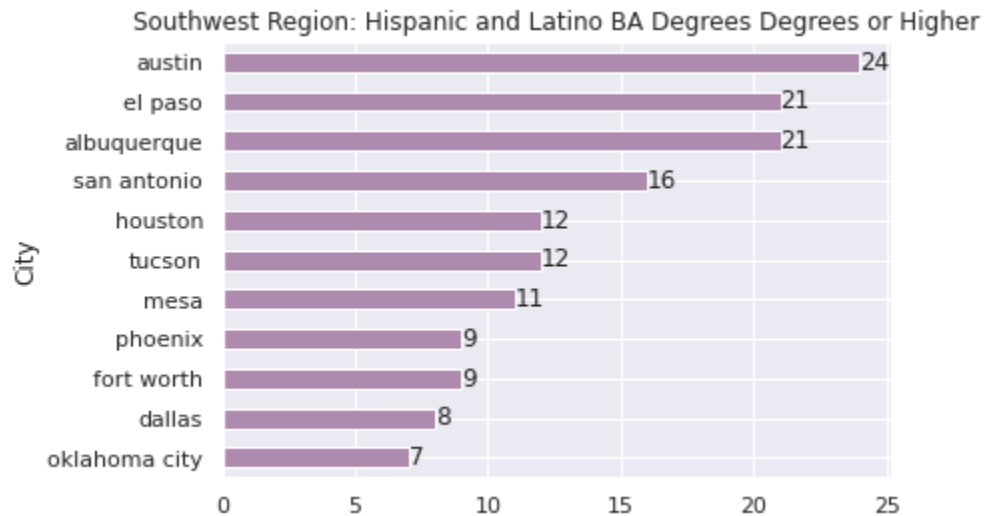
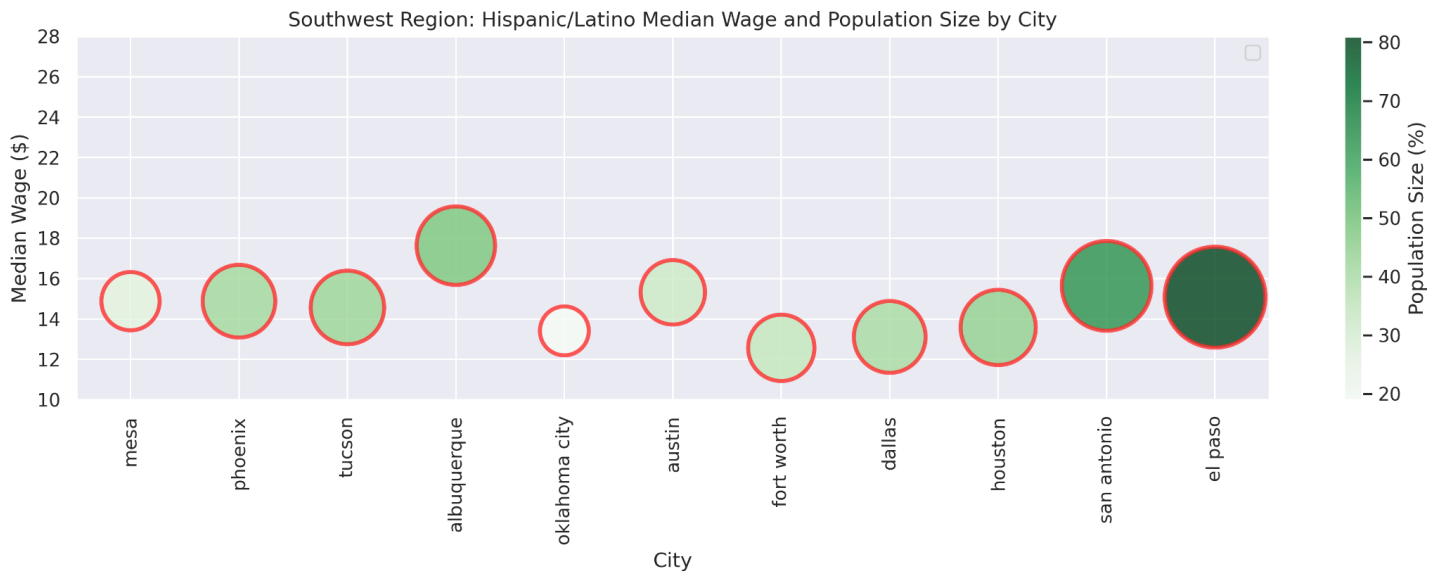


- In the Midwest and the Southwest, as the population of Hispanic and Latino people increases, so does the median wage and the number of people holding a BA degree.
- While the Southwest has the third highest median wage, based on the trends in this region, it would be interesting to look at if a growing population of Hispanics and Latinos in this area could result in a higher earning potential. More data would have to be collected on the individual cities in this area to test if the relationship between the two variables is causal, but it may be something worth paying attention to.



- The Northeast and West have the highest earning potential for the Hispanic and Latino population.
- The cities with the highest median wages also have the highest number of Hispanic and Latino people with a BA degree or higher. They also have some of the smallest populations of this demographic.
- The cities with the lowest median wages, such as Las Vegas, Fresno, Los Angeles, and Philadelphia, also have the lowest number of Hispanic and Latino people holding a BA degree. Excluding Philadelphia, these cities also have the largest population of the demographic.

If considering the West and Northeast regions for relocation, it may be important to pay attention to which cities have the highest number of people with a degree, since those cities tend to have a higher median wage. Portland and Baltimore may be an exception to this trend, because even though these two cities have a high percentage of Hispanic and Latino people with a BA Degree or higher, they have some of the lowest median wages out of both regions.

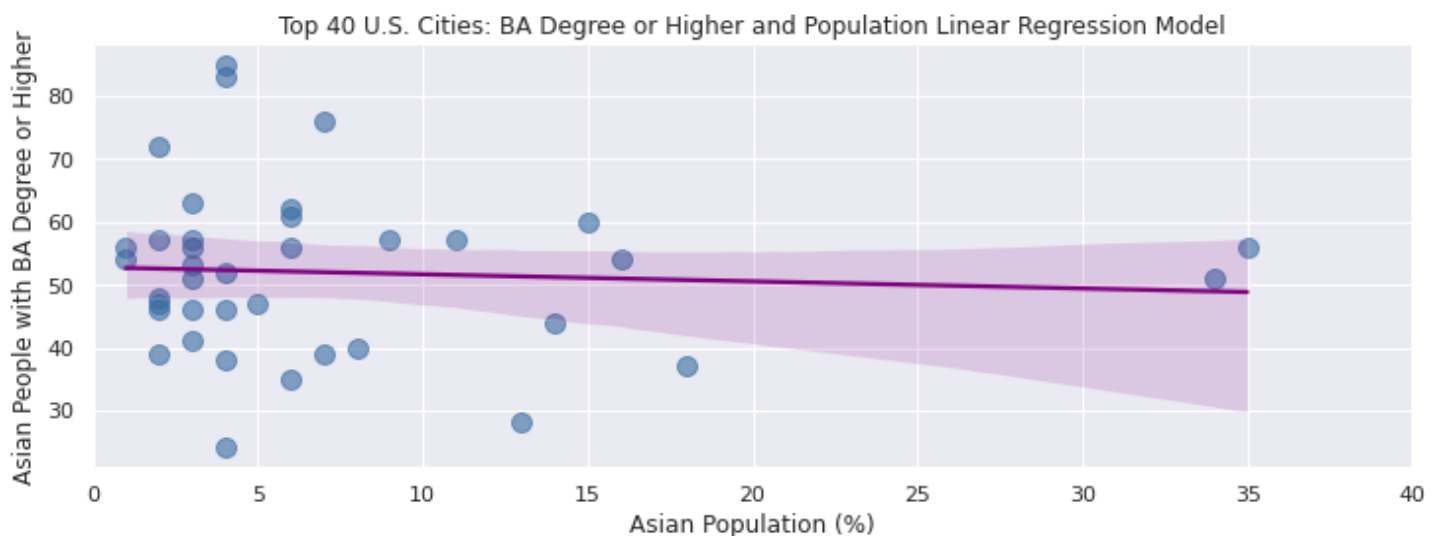
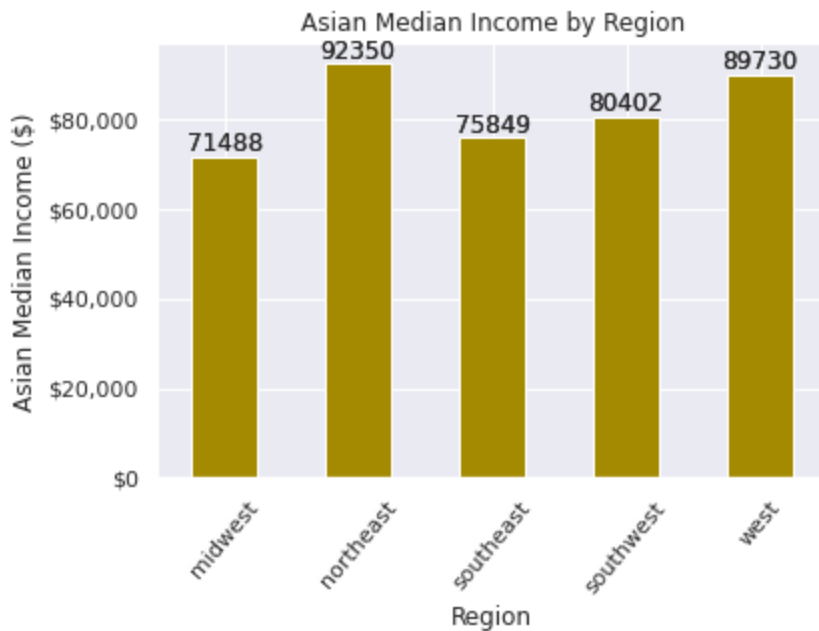


Looking specifically at the cities in the state of Texas, as the Hispanic and Latino population increases, so does the median wage. Austin does not fall in line with this trend, as it has the lowest population of Hispanic and Latino people and one of the highest median wages in Texas. This could be due to it having the highest percentage of people with a BA Degree or higher.

While the West and Northeast have higher earning potential for this demographic, it may be a good idea to keep an eye on the Southwest for both a higher earning potential and a growing population of Hispanic and Latino people. Collecting more data on the cities in this region may produce some more interesting insights.

Asian Demographic: Population, Median Wage and Education

Once again, we see that West and Northeast regions have the highest median incomes. Similar to the Black demographic, and the Hispanic and Latino demographic, Asian people are doing the best in areas where their populations are one of the largest and one of the smallest.



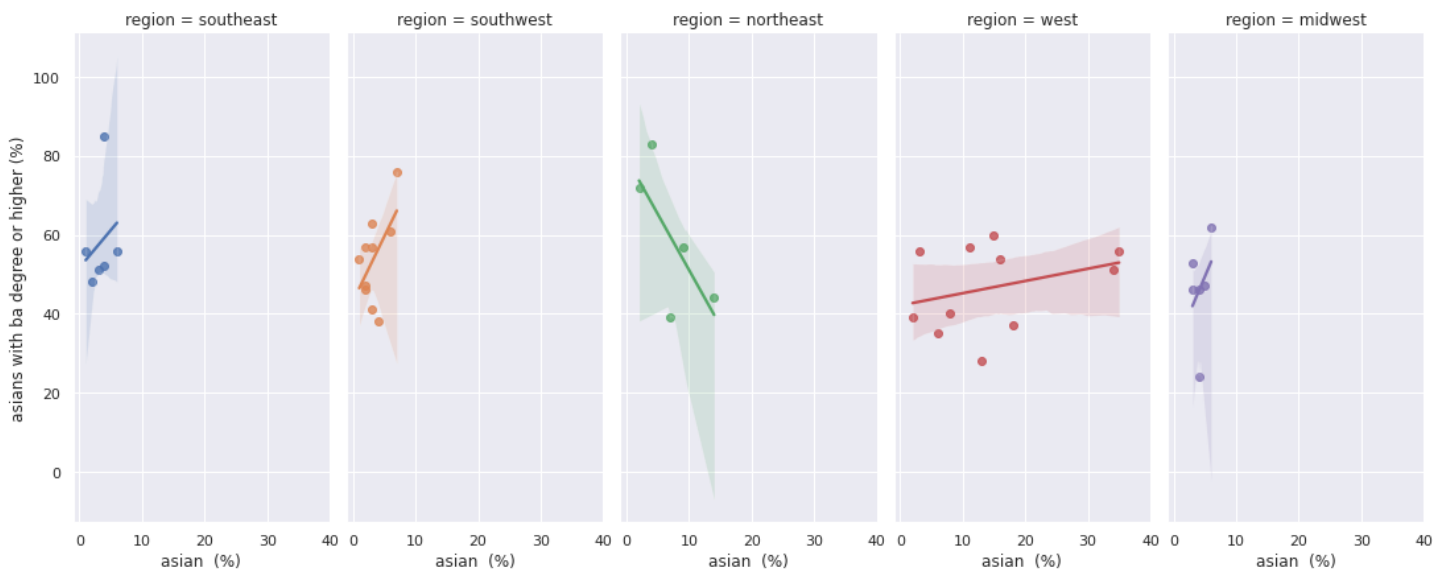
- Excluding the two outliers at around 35% in the first visual, most of the Asian population makes up less than 20% of the top 40 populated cities.

- There is a slight upward trend when looking at the correlation between median wage and population, different from what we've seen with the other two demographics.
- Population percentage does not appear to have a significant relationship with the percentage of the Asian population who have a BA degree or higher, which is also different from what we have previously seen.

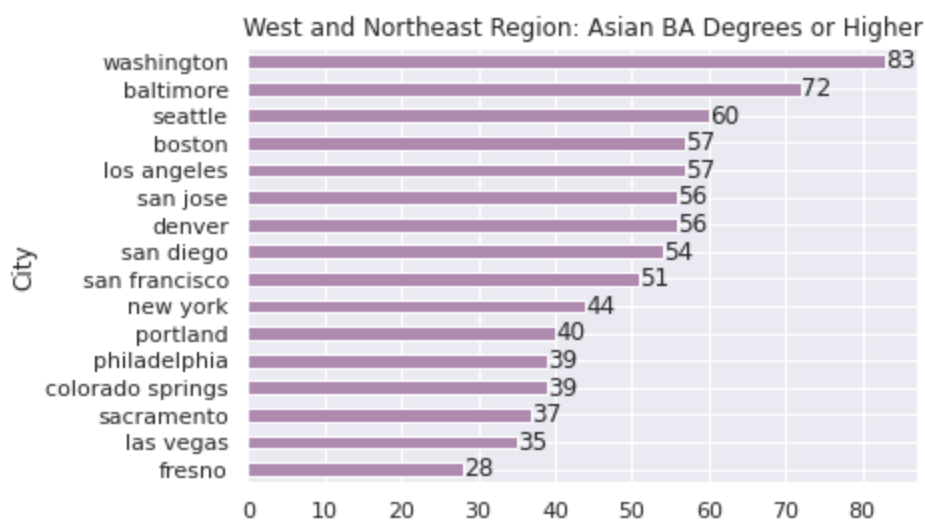
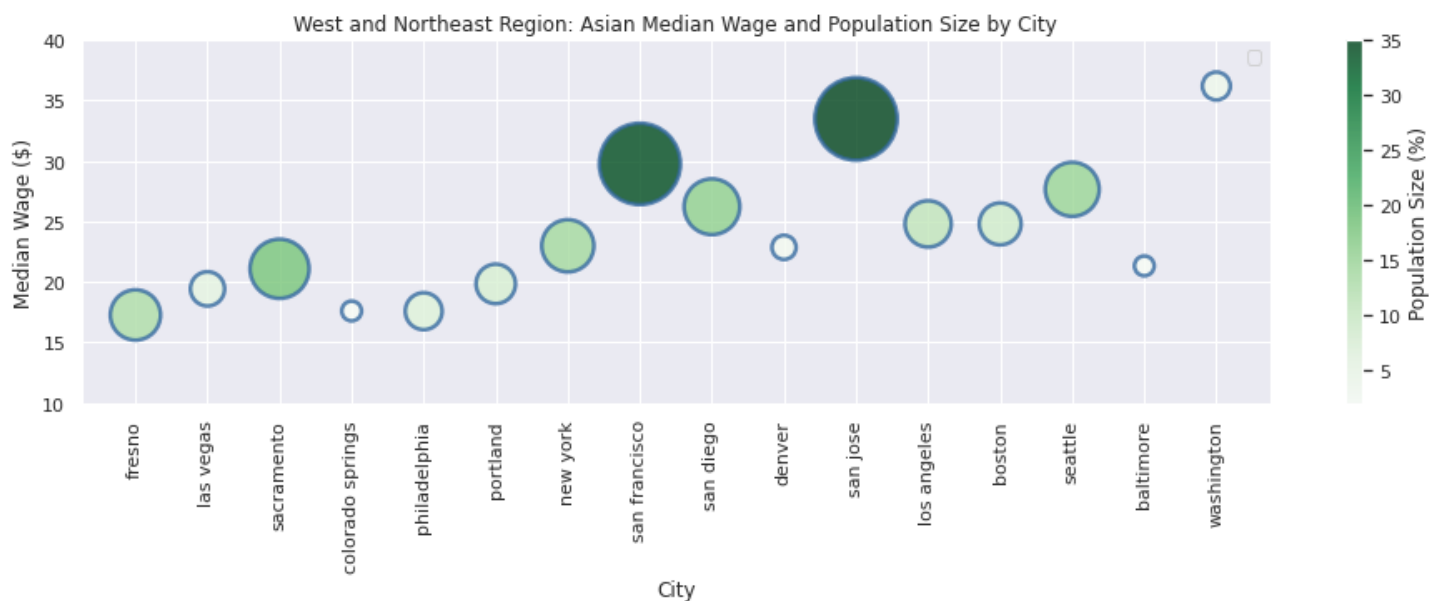
Asian Median Wage and Population Trends by Region



Asian Median Wage and Population Trends by Region



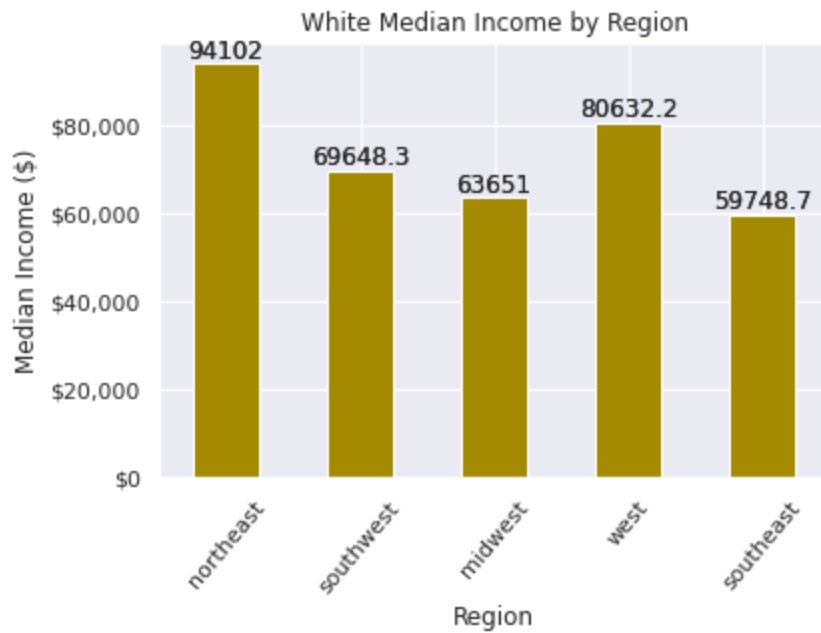
- The two cities causing the outliers are located in the Western region, the only region with an Asian population of over 20%. This region shows an increase in population correlating to a higher median wage and higher number of people holding a BA Degree.
- The Northeast has a very clear downward trend when looking at the correlation between population size and median wage and population and the percentage of the Asian population who have a BA degree or higher that could be interesting to further explore.



- San Francisco and San Jose show to be the most promising for Asians looking to relocate where they will find a higher population of other Asians who are high earners.
- Baltimore has the second highest percentage of an Asian population with a BA degree or higher but also has one of the lowest median wages and smallest Asian populations. Perhaps a BA degree does not hold as

much weight in this city. This could be interesting for further exploration.

In the Northeast, Washington DC once again is the city with the highest earners of a demographic. What each analysis has in common, is that along with being high in median wage, Washington D.C. also has a higher number of people with B.A. degrees, as we can see that 83% of Asian people with a B.A. degree are located in this city. The Western region has about the same earning potential as the Northeast, and may be a good place to consider relocating to for Asians who want to be in community with other Asians, due to higher levels of representation in these cities.



White Demographic

In the United States, it's important to recognize that when it comes to the socioeconomic success of different groups, minorities have always faced a specific set of barriers in achieving success in ways that the White demographic has not. Including data for the White demographic was a choice to use it as a comparative resource. We're looking for

how trends may differ from trends of the Black, Hispanic and Latino, and Asian communities.



We can see here that when looking at the relationship between population and median wage, White people have a similar trend to the Black, and Hispanic and Latino demographic, and an opposite trend from the Asian demographic, though it's important to note that representation for Asian people have been the lowest out of all ethnicities. They also have the second highest income in all regions except the Northeast, where they have the highest income out of all demographics. With all the variability seen in the trends between different regions and within each demographic, there is no clear answer on which cities rank the best in terms of livability for minorities.