**Austin vs. San Francisco: A Comparison of Two Tech Hubs**

Chandini Ramesh

August 30, 2020

1. **Introduction**

San Francisco and Austin are two of the largest hubs for technology companies. Due to the growing rent costs in San Francisco, many techies have been recently relocating to Austin as it boasts many of the same perks. Austin currently has a population of over 900,000, while San Francisco's a little over 800,000. However, both the cities have dramatically different population densities. Although Austin's population is slightly higher, their population density is only around 3,000 people per square mile. This same value is a whopping 18,000 in San Francisco. In this report, I will compare Austin and San Francisco using population, and geographic data to really see just how much these two cities differ.

By comparing these two cities, we can see if San Francisco techies are really making a comparable leap moving from the Bay Area to Austin, Texas. I chose to do my presentation on this topic as I have been a San Francisco Bay Area resident almost my entire life, and currently reside here. After visiting Austin for a long weekend last summer, I fell in love with the city and would love to one day move there. As a young millennial, something that is important to me in a city are the activities and food options like restaurants. Doing this analysis will help me compare what my life would be like in both the places and hopefully help me make an informed decision.

1. **Data Description**

The following data was collected for the analysis:

* Austin population data from government census
* San Francisco population data from government census
* Foursquare API to get most common venues in Austin and San Francisco

1. **Methodology**

This first thing that I did as part of this project was to look at the population data for both Austin and San Francisco. I decided to use the census data from 2010 because it was readily available for both cities. The following tables represent some of the key metrics that I looked at when comparing the population data for both of the cities.

A screenshot of a cell phone

Description automatically generated

**A picture containing building

Description automatically generated**

I not only looked at the racial breakdown based on the population but also the break down based on age.

A picture containing clock

Description automatically generated

A picture containing clock

Description automatically generated

1. **Results**

Once I got an understand of the population breakdown. I dove into looking at both the cities themselves, and the venues that are common to both. For this, I used the Foursquare API and python to visualize the venues. I also used matplotlib to plot a bar chart of most common venues in each city based on their category. Here are the results from both:

A close up of a map

Description automatically generated

**A picture containing text, map

Description automatically generated**

San Francisco Venues: Austin Venues:

**A screenshot of a cell phone

Description automatically generatedA screenshot of a cell phone

Description automatically generated**

1. **Discussion**

The first thing that I noticed when comparing the population data of the two cities was that they were very similar in terms of population demographics. The couple places in which they vary is in the Asian population, where that of San Francisco is much higher than that of Austin. This is relatively expected, as San Francisco has a significant Asian population especially due to the presence of Silicon Valley.

The next thing I noticed in terms of the population of both of the cities is that Austin has much more people in the 0-24 age demographic. This leads me to believe that Austin has considerably more families than San Francisco.

Next, to find the information regarding what kind of restaurants and establishments are common in both the cities, I used the Foursquare API and put the information into a dataframe. I first plotted this data on a map to be able to visualize it. I used what was considered the central location for both Austin and San Francisco to get a snapshot of the venues for the entire city. The red dot on the map represents this “central” point.

I then manipulated the dataframe in order to count the number of venues that belonged to certain categories. This is the data that is present in the bar graphs. Here we can see that San Francisco has many Asian restaurants especially Vietnamese, which corresponds with the higher Asian population. On the contrary, Austin has a significant number of Mexican restaurant, which aligns with its Hispanic/Latino population. The Hispanic/Latino population in Austin is almost double that of San Francisco.

1. **Conclusion**

Overall, this project gave me the opportunity to do a comparison of the two cities of San Francisco based on a couple of factors like population and restaurant. These are clearly not the only two factors on which to compare a city. Additional things that could be looked into include weather, job opportunities and even real estate prices.

That being said, this did give me an insight into some important distinctions on both Austin and San Francisco. But, based on these two factors I would say the two cities are pretty similar. It’s no wonder that so many people from San Francisco seem to be moving to Austin more and more.