**Bringing Another Professional Sports Team to San Antonio**

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**1. Introduction**

**1.1 Background**

Professional sports in many people’s lives are as important as eating breakfast. It gives them the ultimate satisfaction and joy they need to get through everyday life. Most large cities embrace this by having multiple professional sports teams in their city for people to enjoy and help them relax in times of need. When looking at the top seven largest cities in the United States, something appears to be unusual though. All the cities have multiple professional sports teams expect one and that city is San Antonio, TX. This report is going to start off with a comparison of these largest cities as far as population and how many professional sports teams are in these cities. It will continue with an overview of San Antonio and why San Antonio is a great location to add another professional sports team. Finally, the report will look at potential attendance and revenue for an owner looking to bring in a Major League Baseball team to San Antonio.

**1.2 Problem**

The people of San Antonio are being deprived of professional sports in their city. Right now, there are the San Antonio Spurs (NBA) and nothing else. The best areas to explore when looking into adding a sports team to a city are the location, population and land area. We need to make sure there will be enough people interested, in a great location, with plenty of land to build a stadium. San Antonio checks all these boxes.

**1.3 Interest**

Potential professional sports owners and sports owner looking to change locations to improve revenue would be interested at looking into San Antonio as a city to either start a professional team or to move a professional team. The city of San Antonio would also have an interest because there is potential to bring in more people into the city which in turn would bring more money into the city.

**2. Data acquisition and cleaning**

**2.1 Data sources**

To get the data that I needed I used multiple websites. To do the population and sports teams per city comparison I used websites <https://en.wikipedia.org/wiki/List_of_United_States_cities_by_population> and <http://www.stadium-maps.com/facts/sports-franchises.html>. To look at San Antonio as a great location for another professional team I used Foursquare and <https://sanantonio.areaconnect.com/zip2.htm?city=San+Antonio>. Finally, to see potential attendance and revenue I used <https://www.morssglobalfinance.com/major-league-baseball-finances-what-the-numbers-tell-us/>.

**2.2 Data cleaning**

There are some great tables in these websites but scraping them proved to be challenging. To start, I was able to scrape the population table within the most populous cities in the United States Wikipedia website. Once I had this table scraped, I was able to clean it and get the information that I needed. Most importantly, the population and land area information.

Next, I used the San Antonio zip codes website and Foursquare to look at San Antonio as a city. The San Antonio zip codes table provided me with the zip codes I needed plus the latitude and longitude of the different parts of the city. Unfortunately, getting this table into my report wasn’t as easy I had hoped. I had to create a new table because the table on the website had a security lock and it wouldn’t let me scrape it. The Foursquare website helped me look at different venues within the San Antonio neighborhoods and gave me a better idea on where a stadium could be built.

Finally, I used the Major League Baseball finances website to get information about the attendance and revenue of the top six largest cities in the United States. I took this information and created two new columns and added them to the population table. From here I computed the averages of the attendance and revenue columns to give an estimate of how many people and how much revenue potential there could be for potential owners thinking about starting or bringing a professional team to San Antonio.

**2.3 Feature selection**

After data cleaning, I was left with three main tables and Foursquare information to use in this report. The first table had 317 rows and 5 columns. The rows are showing the most populous cities in the United States in order from largest to smallest and the column attributes are rank, city, state, population and land area. I only used the first 7 rows of this table for my analysis.

The second section of the report includes the second table created along with the Foursquare information. The second table consists of 12 rows and 5 columns. The rows have information on the different neighborhoods in San Antonio by zip code. The column attributes are zip code, county, neighborhood, latitude and longitude. The Foursquare information goes over the different venues in San Antonio. It has 9 rows and 74 columns. I did a top ten venue analysis from this information.

The final part of the report uses a table that has 7 rows and 6 columns. The rows again are by population rank but this time the column attributes include rank, city, state, team, attendance per game and yearly revenue in millions. I was able to use the information provided to make an estimate on how much a potential owner could make in revenue if their team were to be in San Antonio.