What Business to Start in San Antonio, TX

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**Abstract**:

This article analyzes what are the possible good businesses to start in one of the fastest growing cities in the US, San Antonio, TX. With clustering technology and comparing with Phoenix, AZ, Coffee shop can be good business to start in San Antonio, TX since Coffee shops are much more popular in Phoenix neighborhoods which are similar to San Antonio Neighborhoods.

## Introduction

San Antonio, TX (SA) is the fastest growing city in the US from year 2016 to 2017. According to Forbes, there are More than 24,200 People moved to SA by the year[[1]](#footnote-1). Given the large in flow of population, there will be business opportunities in the city. In this project, we analyze which kind of business would appreciate to start in the lovely city.

We start with a comparable but much more matured city, Phoenix, AZ (PHX). We want to learn what type of businesses are popular in PHX neighborhoods but not so in SA neighborhoods. We first group the neighborhoods in both PHX and SA according to their existing business and attractions with clustering technology. For each group, we then check into what the most popular businesses of PHX neighborhoods which are not so of SA neighborhoods of the same group. This give us some idea that those type of business can have good potential in SA since they are proven to be successful in PHX, however, not yet getting enough footage in SA.

We therefore can recommend those type of businesses to the entrepreneurs who are enthusiastic of initialize their business in SA.

## Data

The data used for this project include the zip codes of both SA and PHX from zipcode.com and the coordinates of all the US zip codes. The venue data for both SA and PHX are also acquired from Foursquares API.

We first match the SA and PHX zip codes with the coordinates accordingly. Then, we acquire all the venue data from Foursquares with the API. We only keep the neighborhood with more than 10 venues for analysis.

## Empirical design and result

With all the venues from all the neighborhood, we run an unsupervised K-mean clustering to group the neighborhoods from both cities to 10 groups.

For each of the group, we analyze sort the neighborhoods by city and top 3 venues. We then investigate the popular venues in PHX of the group. If a venue is popular in PHX of a given group while not so in SA neighborhood of the same group, we will suggest the venue to whom wants to start a new business in SA.

A full cluster output can be found in the appendix.

We use Cluster 3 (or Group 3) to illustrate how the analysis is being done.

As in Table 1, for Cluster 3, there are 6 appearance of ***Coffee Shop*** in PHX neighborhood, but none for SA neighborhood. Given the consumption behavior of US residence and the similarity of SA and PHX, it is not difficult to identify ***Coffee Shop*** can be the golden opportunity for the people willing to open business in SA.

**Table 1: Analysis for what kind of business would be good to**

**start in the SA neighborhood of Cluster 3**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Zip** | **City** | **Cluster** | **1st Most Common** | **2nd Most Common** | **3rd Most Common** |  |
| 85003 | PHX | 3 | American Restaurant | Music Venue | Coffee Shop | ###### |
| 85019 | PHX | 3 | Automotive Shop | Rental Service | Mexican Restaurant |  |
| 85027 | PHX | 3 | Bagel Shop | BBQ Joint | Yoga Studio |  |
| 85029 | PHX | 3 | BBQ Joint | Hookah Bar | Bed & Breakfast |  |
| 85008 | PHX | 3 | Burger Joint | Pharmacy | Fast Food Restaurant |  |
| 85016 | PHX | 3 | Coffee Shop | American Restaurant | Cosmetics Shop |  |
| 85018 | PHX | 3 | Coffee Shop | Fast Food Restaurant | Gluten-free Restaurant |  |
| 85004 | PHX | 3 | Coffee Shop | Pizza Place | American Restaurant |  |
| 85013 | PHX | 3 | Cosmetics Shop | Park | Coffee Shop |  |
| 85031 | PHX | 3 | Fast Food Restaurant | Chinese Restaurant | Pharmacy |  |
| 85007 | PHX | 3 | Food Truck | Athletics & Sports | Chinese Restaurant |  |
| 85028 | PHX | 3 | Intersection | Flea Market | Gas Station |  |
| 85009 | PHX | 3 | Mexican Restaurant | Auto Workshop | Yoga Studio |  |
| 85006 | PHX | 3 | Mexican Restaurant | Taco Place | Café |  |
| 85021 | PHX | 3 | Park | American Restaurant | Playground |  |
| 85023 | PHX | 3 | Racetrack | Warehouse Store | Sports Club |  |
| 85015 | PHX | 3 | Record Shop | Fried Chicken Joint | Discount Store |  |
| 85017 | PHX | 3 | Rental Car Location | Convenience Store | Fast Food Restaurant |  |
| 85022 | PHX | 3 | Trail | Yoga Studio | Flea Market |  |
| 78216 | SA | 3 | Airport Lounge | Airport Terminal | Rental Car Location |  |
| 78242 | SA | 3 | American Restaurant | Discount Store | Auto Garage |  |
| 78251 | SA | 3 | American Restaurant | Resort | Pool |  |
| 78204 | SA | 3 | Bakery | Art Gallery | Lounge |  |
| 78230 | SA | 3 | Bakery | Pizza Place | Rock Club |  |
| 78210 | SA | 3 | Buffet | Yoga Studio | Flower Shop |  |
| 78215 | SA | 3 | Burger Joint | Yoga Studio | American Restaurant |  |
| 78259 | SA | 3 | Construction & Landscaping | Yoga Studio | Flea Market |  |
| 78223 | SA | 3 | Convenience Store | Discount Store | Mexican Restaurant |  |
| 78220 | SA | 3 | Convenience Store | Flea Market | Gas Station |  |
| 78243 | SA | 3 | Convenience Store | Sandwich Place | Gym / Fitness Center |  |
| 78202 | SA | 3 | Discount Store | Mexican Restaurant | BBQ Joint |  |
| 78208 | SA | 3 | Fast Food Restaurant | Hotel | BBQ Joint |  |
| 78207 | SA | 3 | Fast Food Restaurant | Mexican Restaurant | Fried Chicken Joint |  |
| 78247 | SA | 3 | Gas Station | Video Store | Business Center |  |
| 78237 | SA | 3 | General Entertainment | Flea Market | Gas Station |  |
| 78231 | SA | 3 | Grocery Store | Donut Shop | Yoga Studio |  |
| 78234 | SA | 3 | Gym | Fast Food Restaurant | Pool |  |
| 78249 | SA | 3 | Gym | Trail | Yoga Studio |  |
| 78248 | SA | 3 | Gym / Fitness Center | Pharmacy | Building |  |
| 78236 | SA | 3 | Hotel | BBQ Joint | Pizza Place |  |
| 78205 | SA | 3 | Hotel | Steakhouse | Bar |  |
| 78257 | SA | 3 | Insurance Office | Yoga Studio | Flea Market |  |
| 78227 | SA | 3 | Mexican Restaurant | Fast Food Restaurant | Convenience Store |  |
| 78213 | SA | 3 | Mexican Restaurant | Fast Food Restaurant | Ice Cream Shop |  |
| 78201 | SA | 3 | Mexican Restaurant | Fried Chicken Joint | Chinese Restaurant |  |
| 78212 | SA | 3 | Mexican Restaurant | Shipping Store | Furniture / Home Store |  |
| 78228 | SA | 3 | Music Store | Wings Joint | Construction & Landscaping |  |
| 78250 | SA | 3 | Pizza Place | Bar | Liquor Store |  |
| 78209 | SA | 3 | Pizza Place | Ice Cream Shop | Art Museum |  |
| 78244 | SA | 3 | Pool | Yoga Studio | Flea Market |  |
| 78260 | SA | 3 | Pool | Yoga Studio | Flea Market |  |
| 78217 | SA | 3 | Seafood Restaurant | Food Truck | Karaoke Bar |  |
| 78203 | SA | 3 | Southern / Soul Food Restaurant | Fried Chicken Joint | Mexican Restaurant |  |
| 78245 | SA | 3 | Sporting Goods Shop | Yoga Studio | Flea Market |  |
| 78224 | SA | 3 | Stables | Flea Market | Gas Station |  |
| 78226 | SA | 3 | Track | Airport Terminal | Hotel |  |
| 78225 | SA | 3 | Video Store | Mexican Restaurant | Pharmacy |  |

## Conclusion

This project aims to answer the question “*What kind of business should I do in SA?”* for potential entrepreneurs who are interested in open business in San Antonio, TX. Based on a cluster analysis and the rich location data, our analysis shows that Coffee shop can be the most possible business to success in SA.

## Appendix

Table A: The full cluster of all neighborhood of SA and PHX

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Zip** | **City** | **Cluster** | **1st Most Common** | **2nd Most Common** | **3rd Most Common** |
| 85032 | Phoenix | 0 | Park | Intersection | Playground |
| 78240 | San Antonio | 0 | Grocery Store | Liquor Store | Pizza Place |
| 78229 | San Antonio | 1 | Hotel | Sandwich Place | Yoga Studio |
| 78239 | San Antonio | 1 | IT Services | Tree | Yoga Studio |
| 85033 | Phoenix | 2 | Bus Station | Yoga Studio | Flower Shop |
| 85020 | Phoenix | 2 | Mexican Restaurant | Bowling Alley | Park |
| 85003 | Phoenix | 3 | American Restaurant | Music | Coffee Shop |
| 85019 | Phoenix | 3 | Automotive Shop | Rental Service | Mexican Restaurant |
| 85027 | Phoenix | 3 | Bagel Shop | BBQ Joint | Yoga Studio |
| 85029 | Phoenix | 3 | BBQ Joint | Hookah Bar | Bed & Breakfast |
| 85008 | Phoenix | 3 | Burger Joint | Pharmacy | Fast Food Restaurant |
| 85016 | Phoenix | 3 | Coffee Shop | American Restaurant | Cosmetics Shop |
| 85018 | Phoenix | 3 | Coffee Shop | Fast Food Restaurant | Gluten-free Restaurant |
| 85004 | Phoenix | 3 | Coffee Shop | Pizza Place | American Restaurant |
| 85013 | Phoenix | 3 | Cosmetics Shop | Park | Coffee Shop |
| 85031 | Phoenix | 3 | Fast Food Restaurant | Chinese Restaurant | Pharmacy |
| 85007 | Phoenix | 3 | Food Truck | Athletics & Sports | Chinese Restaurant |
| 85028 | Phoenix | 3 | Intersection | Flea Market | Gas Station |
| 85009 | Phoenix | 3 | Mexican Restaurant | Auto Workshop | Yoga Studio |
| 85006 | Phoenix | 3 | Mexican Restaurant | Taco Place | Café |
| 85021 | Phoenix | 3 | Park | American Restaurant | Playground |
| 85023 | Phoenix | 3 | Racetrack | Warehouse Store | Sports Club |
| 85015 | Phoenix | 3 | Record Shop | Fried Chicken Joint | Discount Store |
| 85017 | Phoenix | 3 | Rental Car Location | Convenience Store | Fast Food Restaurant |
| 85022 | Phoenix | 3 | Trail | Yoga Studio | Flea Market |
| 78216 | San Antonio | 3 | Airport Lounge | Airport Terminal | Rental Car Location |
| 78242 | San Antonio | 3 | American Restaurant | Discount Store | Auto Garage |
| 78251 | San Antonio | 3 | American Restaurant | Resort | Pool |
| 78204 | San Antonio | 3 | Bakery | Art Gallery | Lounge |
| 78230 | San Antonio | 3 | Bakery | Pizza Place | Rock Club |
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| 78223 | San Antonio | 3 | Convenience Store | Discount Store | Mexican Restaurant |
| 78220 | San Antonio | 3 | Convenience Store | Flea Market | Gas Station |
| 78243 | San Antonio | 3 | Convenience Store | Sandwich Place | Gym / Fitness Center |
| 78202 | San Antonio | 3 | Discount Store | Mexican Restaurant | BBQ Joint |
| 78208 | San Antonio | 3 | Fast Food Restaurant | Hotel | BBQ Joint |
| 78207 | San Antonio | 3 | Fast Food Restaurant | Mexican Restaurant | Fried Chicken Joint |
| 78247 | San Antonio | 3 | Gas Station | Video Store | Business Center |
| 78237 | San Antonio | 3 | General Entertainment | Flea Market | Gas Station |
| 78231 | San Antonio | 3 | Grocery Store | Donut Shop | Yoga Studio |
| 78234 | San Antonio | 3 | Gym | Fast Food Restaurant | Pool |
| 78249 | San Antonio | 3 | Gym | Trail | Yoga Studio |
| 78248 | San Antonio | 3 | Gym / Fitness Center | Pharmacy | Building |
| 78236 | San Antonio | 3 | Hotel | BBQ Joint | Pizza Place |
| 78205 | San Antonio | 3 | Hotel | Steakhouse | Bar |
| 78257 | San Antonio | 3 | Insurance Office | Yoga Studio | Flea Market |
| 78227 | San Antonio | 3 | Mexican Restaurant | Fast Food Restaurant | Convenience Store |
| 78213 | San Antonio | 3 | Mexican Restaurant | Fast Food Restaurant | Ice Cream Shop |
| 78201 | San Antonio | 3 | Mexican Restaurant | Fried Chicken Joint | Chinese Restaurant |
| 78212 | San Antonio | 3 | Mexican Restaurant | Shipping Store | Furniture / Home Store |
| 78228 | San Antonio | 3 | Music Store | Wings Joint | Construction & Landscaping |
| 78250 | San Antonio | 3 | Pizza Place | Bar | Liquor Store |
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| 78244 | San Antonio | 3 | Pool | Yoga Studio | Flea Market |
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| 78203 | San Antonio | 3 | Southern / Soul Food Restaurant | Fried Chicken Joint | Mexican Restaurant |
| 78245 | San Antonio | 3 | Sporting Goods Shop | Yoga Studio | Flea Market |
| 78224 | San Antonio | 3 | Stables | Flea Market | Gas Station |
| 78226 | San Antonio | 3 | Track | Airport Terminal | Hotel |
| 78225 | San Antonio | 3 | Video Store | Mexican Restaurant | Pharmacy |
| 78238 | San Antonio | 4 | Clothing Store | Shoe Store | Cosmetics Shop |
| 78218 | San Antonio | 4 | Hotel | Casino | Electronics Store |
| 85012 | Phoenix | 5 | Boutique | Pizza Place | Furniture / Home Store |
| 78235 | San Antonio | 5 | Convenience Store | Playground | Yoga Studio |
| 78232 | San Antonio | 5 | Toy / Game Store | Dive Bar | Mexican Restaurant |
| 85014 | Phoenix | 7 | Pizza Place | Moving Target | Arts & Crafts Store |
| 78233 | San Antonio | 8 | Warehouse Store | Hotel | Other Repair Shop |
| 78258 | San Antonio | 9 | Video Store | Park | Yoga Studio |

1. [[https://www.forbes.com/sites/candaceevans/2018/07/13/largest-population-boom-in-the-country-is-in-san-antonio-texas-because-business/#1a6a1d652b4b](https://www.forbes.com/sites/candaceevans/2018/07/13/largest-population-boom-in-the-country-is-in-san-antonio-texas-because-business/)](https://www.forbes.com/sites/candaceevans/2018/07/13/largest-population-boom-in-the-country-is-in-san-antonio-texas-because-business/#1a6a1d652b4b) [↑](#footnote-ref-1)