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An Analysis of Kansas City and its Neighborhoods

Introduction

- Hispanic migration to the Kansas City area dates as far back as the 1830s
- The first major wave of immigration came with the establishment of railroads in Kansas City, Kan., and Kansas City, Mo.
- In the past 20 years, turmoil in Central America and Mexico has brought a new wave of immigration to the Kansas City area.
- Target audiences for this project does not limit to Latino and Hispanic people but everyone.

Data

- List/Information on neighborhoods from Kansas City with their respective Geodata (latitude and longitude)
- Venues and amenities in the Kansas City neighborhoods (e.g. top 10)
- Determining the venues in these neighborhoods will allow others who only seek for a place to eat or enjoy a night out with information to make their decision.
- This information can be further explored for key insights into the make up of a community.

Methodology

- Acquire a data set for Kansas City and its neighborhoods
- Format to include only the data of importance (Geolocation, Neighborhoods)
- Data set was then converted onto a data-frame
- A map with an overlay of all the neighborhoods in the list was generated using the Geodata and Nominatim
- To determine potential neighborhoods to live location data using the foursquare API was used to determine the most popular venues in the neighborhoods.
- These were then listed and sorted determining the most popular establishments per neighborhood.
- A further analysis in venues and was done by clustering the neighborhoods and determining which clusters are potentially more relevant to our search.
- An assumption was made to establish a cut off and limit the rental search using the most common venue as an indicator of community makeup.
- With this in mind a data-frame with the neighborhoods with Mexican restaurant as their most common venue was established.
- A further exploration of one said neighborhoods Indian Mound Neighborhood was performed by mapping the nearby locations, to include as far as 2000m since some neighborhoods are primarily residential and to encompass a larger area of interest.

Results

- In this analysis we have explored the locations of Latin or Hispanic centric communities by assuming the most common venue establishes the majority of the make up of the area. Using clustering based on venues within a short driving distance (defined as 2000m radius) we have clustered the neighborhoods into ten groups. Of these groups, one has more than one instance of Hispanic communities staples like restaurants and other amenities that imply the make-up of the community. Of these it was decided to focus on one specific neighborhood to determine if our assumption was correct. Indian Mound Neighborhood was explored to identify nearby venues or businesses with a relevant keyword. The results showed that within a short drive plenty of restaurants were in the vicinity as well as some dives and even the Mexican Consulate. These provided a form of validation that our simplified assumption served to reduce the query response time while providing valuable information to our initial question.

Discussion

- Based on our results we have identified five neighborhoods where as per our assumption appeared to be Hispanic or Latin centric communities.
- It was established that a correlation with rental information could had made this case stronger but the rental data from zillow was unavailable to scrape due to the API restrictions.
- In theory, using these results, Mexican Restaurant could characterize other areas where Latin American or Mexican immigrants might consider for a potential area to rent or enjoy a night out eating and enjoying the community.

Conclusion

- The aim of this project was to determine the potential location of Hispanic or Latin centric communities with the assumption that the venues in the area showed the potential make up of the community.
- With this assumption it was determined that 5 neighborhoods met the description.
- To clear this we dove deeper and using the Foursquare API information on businesses within a short drive other venues were found.
- This showed a significant number of venues when only using the keyword "Mexican"
- In future subsequent analysis of other nearby establishments like churches and other amenities should be explored to increase the correlation of our simple assumption.