

New Cajun Restaurant in Houston, TX

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Introduction

In this project we will try to find an optimal location for a restaurant. Specifically, this report will be targeted to stakeholders interested in opening an Cajun restaurant in Houston, TX.

Since there are lots of restaurants in Houston, TX we will try to detect locations that are not already crowded with restaurants. We are also particularly interested in areas with no Cajun restaurants in vicinity. We would also prefer locations as close to city center as possible, assuming that first two conditions are met.

We will use our data science powers to generate a few most promising neighborhoods based on this criterion. Advantages of each area will then be clearly expressed so that best possible final location can be chosen by stakeholders.

Data Acquisition and Cleansing

Zip Codes:

- Import Zip Code data from Houston GIS repository.
- Since the zip codes, city and county are stored in 5 different tables, we concatenate the tables to each other to form one table.
- Clean up column names and drop duplicates and “nan” values.

Geolocation:

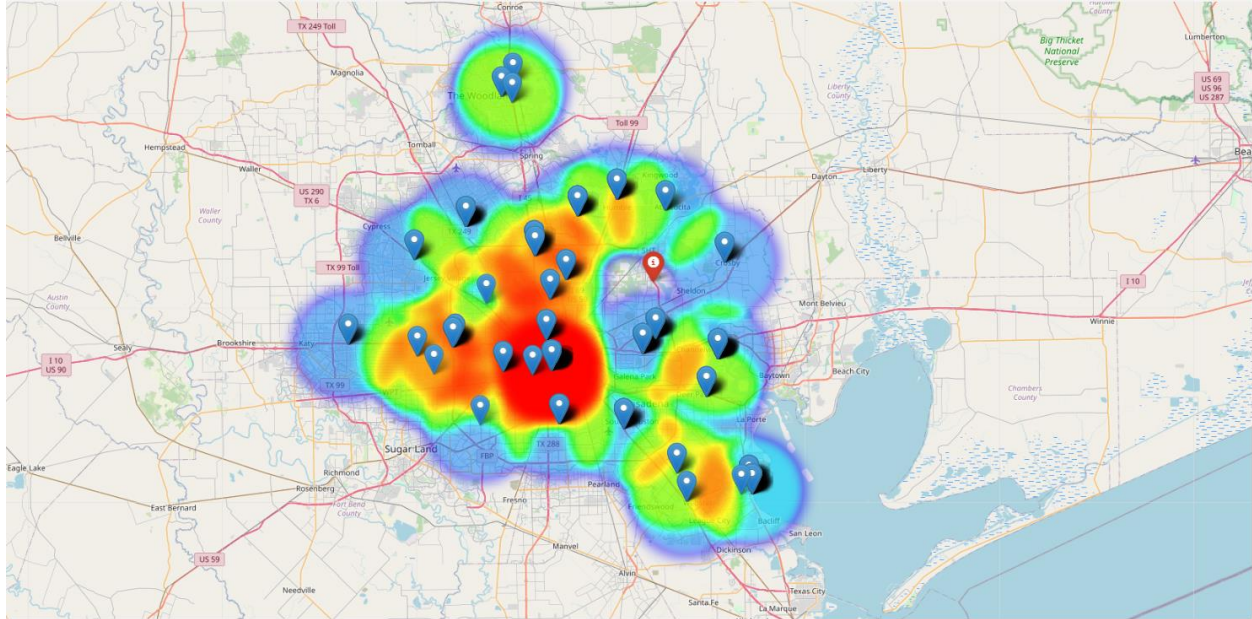
- Import Geopy.Nominatim and Geopy.Extra.Rate.Limiter
- Combine the City, County and Zip Code into a Full Address and run through Geopy to find Latitude and Longitude for each zip code center.
- Drop all extra, non-pertinent columns from new table.

Four Square:

- Input Client Information
- Make a call to FourSquare for all venues within 20km of each zip code center to make sure every possible venue is tabulated.
- Filter out row data based on Venue Category equaling Cajun / Creole Restaurant or Seafood Restaurant.

Data Analysis

Proper site location was found by finding all current locations of Cajun and Seafood Restaurants and using Folium's Heat Map to build a map to find the lowest density area around Houston.



Conclusions

- Heat Map shows the least dense area closest to the city center to be along Beltway 8 at Hwy 90 in the zip code area of 77044.
- There is a shopping center at the intersection of Grannet Road and Beltway 8 that would provide enough commercial space for the new restaurant.