

Indian Restaurant in areas of Chicago by Popular Food Chain

Officially the **City of Chicago**, is the most populous city in the U.S. state of Illinois and the third most populous city in the United States. This makes Chicago a popular destination for businesses. With unique people comes unique food choices. Irrespective of the number of already established restaurants in Chicago, it still has space for something new.

With this in mind, a business wants to explore all the restaurants in Chicago specifically in Near North Side and O'Hare. This business mostly will serve Indian Delicacies. Business model is to cater people who go to gym or Coffee place and would not mind picking up food for lunch or dinner. Or People flying in and out of Chicago O'Hare airport and would like to carry something delicious for the journey ahead.

Business Problem:

1. Find a comprehensive list of business in Chicago area all areas inclusive
2. Get the top five business in the given neighborhood

Data:

1. List of neighborhoods in Chicago, Illinois.

List of neighborhoods by community area [\[edit \]](#)

Neighborhood	Community area
Albany Park	Albany Park
Altgeld Gardens	Riverdale
Andersonville	Edgewater
Archer Heights	Archer Heights
Armour Square	Armour Square
Ashburn	Ashburn
Ashburn Estates	Ashburn
Auburn Gresham	Auburn Gresham
Avalon Park	Avalon Park
Avondale	Avondale
Avondale Gardens	Irving Park
Back of the Yards	New City
Belmont Central	Belmont Cragin
Belmont Gardens	Hermosa
Belmont Heights	Dunning

2. Coordinates of the neighborhoods e.g. latitude and longitude to visualize in term of map and to obtains the venue data using

```
geolocator = Nominatim(user_agent="Chicago_explorer",timeout=3)
```

3. Venue data, data related to business will be fetched using foursquare api venue and explore options.

```
https://api.foursquare.com/v2/venues/explore?client_id={}&cli...
```

Methodology:

1. Use the data from the wiki page
“https://en.wikipedia.org/wiki/List_of_neighborhoods_in_Chicago”
2. Use Web scraping techniques to extract relevant data from the wiki page e.g. BeautifulSoup
3. Use geocode package to get the Latitude and Longitude coordinates for the neighborhoods
4. Use Foursquare API to get the venue data for those neighborhoods.
5. Foursquare API provides many categories of the venue data so extracted only restaurants data to solve the business problem.
6. Data cleaning, data Wrangling, feature engineering methods to improve the quality of data.
7. Apply machine learning, clustering and perform map visualization like Folium.

Results and Recommendations:

The success criteria of the project will be a good recommendation of Neighborhood based on Lack of such restaurants in that location.

As per analysis of data in Chicago, The number of Indian restaurants is least in most of the neighborhoods. Near Northside and O’Hare have 0 Indian restaurants.

Top Business in the most interested areas:

```
----Near North Side----
      venue  freq
0      Yoga Studio  0.06
1  Gym / Fitness Center  0.06
2              Gym  0.06
3      Restaurant  0.06
4      Coffee Shop  0.06
```

----O'Hare----

	venue	freq
0	Airport Lounge	0.15
1	Coffee Shop	0.12
2	Snack Place	0.09
3	Tea Room	0.06
4	Accessories Store	0.06

Clusters representation of business in Different Neighborhood's:

