

Predicting the scope of opening food lounge in Jaipur (Rajasthan, India)

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9th Aug 2019

Introduction

We have all seen how profitable is the food industry and at some point of time wondered about opening one. There are several examples of sport persons and celebrities who have invested in restaurant, cafes, bakeries and whatever you name them. Any way, they have lots of money to invest and spend lot in hiring professional cooks and bakers. Also, there are plenty of common people who are in the business from decades and some are running family businesses i.e. their forefathers too were in the food business. How can someone enter and stabilize their business in the same field if they are new comers? This report explains.

The Problem

As mentioned in the introduction section, the main issue focussed here is for the new comer, who has to keep many things in mind to give his/her restaurant business a start. One major issue is the location i.e. where should he/she invest. Jaipur is a growing city and is one of the most famous food destinations in India. There are several restaurants, cafes, bakeries and street food vendors who are in competition with each other and yet they all profit from what they offer. Otherwise, they would have been shut the next day obviously.

Data Description and Its usage in solving the problem

Location data would definitely help in determining the number of competitors within a certain range, spots where there are less number of competitors, population plays an important role. Lastly, it all depends on the budget but it is worthwhile to spend the budget with some analysis. The Foursquare API will be very helpful in analysis as we can extract the desired information with just a few lines of code and also they provide extensive details related to the particular location.

Methodology

Main Components of The Report

This report consists of the analysis done on different restaurant locations in Jaipur, the capital city of the state of Rajasthan in India. The first two sections describe the problem and data and who would be interested in this analysis. The later sections describe the result and observations and conclusion of the report including suggestions. This report does not include rigorous and thorough analysis, it rather is a simple one and is targeted specifically for those who want to open a small restaurant in Jaipur.

Libraries Used/ Data Sources

I used the foursquare API to get the data of the locations, restaurants in particular. The geopy library was used to get the latitudes and longitudes of different cities in Jaipur. The data was directly not available so I took help of the beautiful soup library to scrape web data. The list of cities in Jaipur was extracted from the following web address <https://finkode.com/rj/jaipur.html>. The restaurants were mapped in a map using the folium library.

Exploratory Analysis

1. Data Cleaning

The data contained lots of duplicates therefore I removed it with the help of pandas built in method. The details of the locations that included pin code and their names were in a separate data frame from the ones which had their longitude and latitude. So, I merged both of them and grouped the locations with the same pin code.

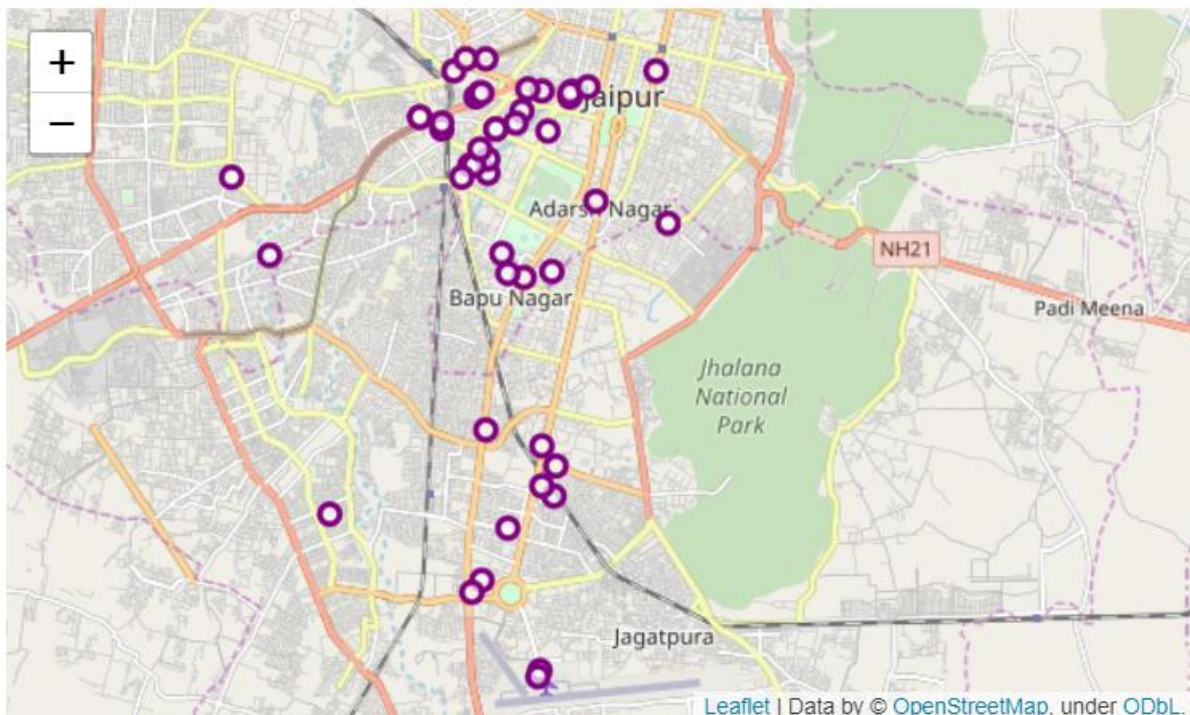
2. Analysis of the Data acquired

Using the Foursquare API, I was able to extract top venues and Jaipur and out of the many venues most of them were food stops.

	name	categories	lat	Ing
0	Kanha restaurant	Indian Restaurant	26.903506	75.753229
1	Baskin Robbins	Ice Cream Shop	26.897825	75.751119
2	Dana Pani	Vegetarian / Vegan Restaurant	26.891594	75.759807
3	burger farm	Fast Food Restaurant	26.905036	75.753015
4	INOX Elements Mall	Multiplex	26.894975	75.748900
5	Subway	Sandwich Place	26.911496	75.743335
6	rj 14	North Indian Restaurant	26.895414	75.750355
7	Pizza Hut	Pizza Place	26.911537	75.743296
8	Cafe Coffee Day	Coffee Shop	26.912121	75.739059
9	Ibis Jaipur	Motel	26.908228	75.779899
10	McDonald's	Fast Food Restaurant	26.882899	75.749877
11	KFC	Fast Food Restaurant	26.911447	75.743466
12	cafe coffee day	Coffee Shop	26.886096	75.731506
13	The Pavilion	Restaurant	26.897810	75.751165
14	Domino's Pizza	Pizza Place	26.912437	75.743647
15	HDFC Bank	Bank	26.911645	75.744295
16	Pratap Yadav Stadium	Athletics & Sports	26.901744	75.735766
17	Hotel Highway King	Indian Restaurant	26.885475	75.731297
18	Mahima's Trinitri Mall	Diner	26.890561	75.771973
19	WebCrafters360	IT Services	26.891186	75.772705
20	IBIS	Hotel Pool	26.908370	75.779966

Surprisingly, out of the many food stops i.e. restaurants, coffee shops, hotels and malls, a sports centre managed to place its spot in the list (see number 16).

Here is a map of the top locations:



Since, Jhotwara is within the range of these places, I decided to explore this place and explored top food venues within 3000 meters of the place. I got the following result.

	name	categories	lat	lng
0	Domino's Pizza	Pizza Place	26.957000	75.778000
1	Pizza Hut	Pizza Place	26.963242	75.779319
2	Cafe Coffee Day	Café	26.962145	75.779295
3	Foodcourt	Food Court	26.956493	75.771905
4	Kanji Hotel And Restaurant	Indian Restaurant	26.963415	75.771530
5	Hanuman Dhaba	Indian Restaurant	26.953814	75.771576
6	Sunflower Restaurant Hotel Paradise	American Restaurant	26.947934	75.773608
7	Spice and curry	Asian Restaurant	26.947953	75.773642
8	Chowdhry Hotel	Snack Place	26.972876	75.772291
9	Kaku Sa's Palace	Indian Restaurant	26.934877	75.749280

Well, without a doubt Domino's Pizza, Pizza Hut and Café Coffee day find their spots in top 3. Now, lets compare that to the over all result of top spots in Jaipur. **Kanha is a popular restaurant in Jaipur (Now, take that for granted because I am a localite and results too show that).**

Lets explore KANHA a bit more

Following is a snapshot of popular venues near Kanha Restaurant.

	name	categories	address	cc	city	country	crossStreet	distance	formattedAddress
0	Kanha restaurant	Indian Restaurant	Queens Road.	IN	Jaipur	India	NaN	0	[Queens Road., Jaipur, Rājasthān, India]
1	Baskin Robbins	Ice Cream Shop	Vaishali Nagar	IN	NaN	India	NaN	666	[Vaishali Nagar, India]
2	Dana Pani	Vegetarian / Vegan Restaurant	Janpath , Shyam Nagar	IN	NaN	India	NaN	1478	[Janpath , Shyam Nagar, India]
3	burger farm	Fast Food Restaurant	Queens House	IN	NaN	India	NaN	171	[Queens House, India]
4	INOX Elements Mall	Multiplex	Third Floor, Elements Mall	IN	Jaipur	India	Ajmer Road	1042	[Third Floor, Elements Mall (Ajmer Road), Jaip...
5	Subway	Sandwich Place	Evershine Tower	IN	Jaipur	India	Vaishali	1324	[Evershine Tower (Vaishali), Jaipur 302021, Rā...
6	rj 14	North Indian Restaurant	Ajmer road	IN	Jaipur	India	NaN	944	[Ajmer road, Jaipur, Rājasthān, India]
7	Pizza Hut	Pizza Place	Shop No 20, Evershine Tower, F1, Amrapali Circle	IN	Jaipur	India	Vaishali Nagar	1331	[Shop No 20, Evershine Tower, F1, Amrapali Cir...
8	Cafe Coffee Day	Coffee Shop	Vaibhav tower	IN	Jaipur	India	Vaishali nagar	1702	[Vaibhav tower (Vaishali nagar), Jaipur, Rājas...
9	Ibis Jaipur	Motel	Civil Lines	IN	Jaipur	India	Ajmer Road	2699	[Civil Lines (Ajmer Road), Jaipur, Rājasthān, ...

OBSERVATION AND DISCUSSION

Looking at the data you can see that the top fooding stops in Jaipur are in Ajmer Road, Vaishali Nagar and Civil Lines (which happens to be in the same spots). Though popular, these spots are on an average 1000 meters far from KANHA. If someone is willing to get into the food business then he/she should find a spot near these popular areas because more people will be found here compared to other areas. Also, if we see the map of top locations above, they all are near the JHALANA national park, that means more tourists and obviously tourists are a great customers for the restaurants in such places.

Conclusion

Even though this analysis was done take advantage of the great APIs and some relevant data. It is not that accurate as Foursquare API was not successful in extracting many top places which I know of. There are various other factors too that play in deciding a spot to open a restaurant in a popular place, including the budget, government law, quality of food. These things have not been considered, I only used what I felt was relevant in the results from the foursquare API. The main point I would like to draw from this analysis is that if there is a popular place in a city and there are a few top spots that are at least 1-2 kms apart then it is a golden opportunity to invest as you can infer from it that it is a growing/developing area and Jaipur indeed is a developing city.