

IBM – Capstone Project

Introduction

I live in Colombia in the capital city: Bogotá, I work in Information Technology with small and medium businesses, and recently in the tourism sector. Colombia especially, at this time of the Covid-19, is hitting the economy of small entrepreneurs who live in the world class turistical town of Villa de Leyva, which are mostly Hotels, Stores, and Restaurants.

Description of data and questions answered

I will use the data that is mainly provided by the Foursquare API, such as the best **Hotels, Restaurants**, to be used in the short, medium, and long term, for projects to reactivate the economy of the town with different touristic operators.




Learn Git and GitHub without any code!




Using the Hello World guide, you'll start a branch, write comments, and open a pull request.

[Read the guide](#)

Branch: **master** [coursera-capstone](#) / IBM - Capstone Villa de Leyva CO.md [Find file](#) [Copy path](#)

 [ojaramil](#) Add files via upload 5681b5e 12 minutes ago

1 contributor

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```
import numpy as np

import pandas as pd
pd.set_option('display.max_columns', None)
pd.set_option('display.max_rows', None)

import json

from geopy.geocoders import Nominatim

import requests
from pandas.io.json import json_normalize

import matplotlib.cm as cm
import matplotlib.colors as colors

from sklearn.cluster import KMeans

import folium

CLIENT_ID = 'Y4KMS3PAB54UJZYMXWD3FT05P04QQJ15HFQJNH3Q4YJGKZJM'
CLIENT_SECRET = 'OU1M4WVB1XD50GXWYSSYZ0AJTE3QZUJGT4ZXEN3ZZZUCDX10'
VERSION = '20200418'
LIMIT= 50

city = 'Villa de Leyva'
geolocator = Nominatim(user_agent="foursquare_agent")
location = geolocator.geocode(city)
latitude = location.latitude
longitude = location.longitude
print(latitude, longitude)

5.6336805 -73.523548

search_query = 'Hotel'
```

```
radius = 500

url = 'https://api.foursquare.com/v2/venues/search?client_id={}&client_secret={}&ll={},{}&v={}&query={}&radius={}&limit={}&offset={}'
.format(CLIENT_ID, CLIENT_SECRET, latitude, longitude, VERSION, search_query, radius, LIMIT)

result_hotel = requests.get(url).json()

result_hotel

venue_hotel = result_hotel['response']['venues']

df = json_normalize(venue_hotel)
df.head()
```

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	categories	hasPerk	id	location.address	location.cc	location.name
0	[[{'id': '4bf58dd8d48988d1fa931735', 'name': 'Hotel Villa de Leyva'}]]	False	4e3cb9c7ae604542365c7d1f	Calle 8 # 10-35	CO	Villa de Leyva
1	[[{'id': '4bf58dd8d48988d1ed941735', 'name': 'Santitas'}]]	False	4f526baae4b023845e5fdd2f	Calle 8 # 10-35	CO	Villa de Leyva
2	[[{'id': '4bf58dd8d48988d1fa931735', 'name': 'Hotel Villa de Leyva'}]]	False	4ebf521993ad36d7a8e101d0	Calle 10 7-31	CO	Villa de Leyva
3	[[{'id': '4bf58dd8d48988d1fa931735', 'name': 'Hotel Villa de Leyva'}]]	False	4cf3f52588de37044318822b	Calle 8	CO	Villa de Leyva
4	[[{'id': '4bf58dd8d48988d1fa931735', 'name': 'Hotel Villa de Leyva'}]]	False	4e0fa8f37d8bb178a8b5221d	NaN	CO	Villa de Leyva

```
new_columns = ['name', 'categories'] + [col for col in df.columns if col.startswith('location.')] + ['id']
new_df = df.loc[:, new_columns]
```

```
def get_category_type(row):
    try:
        categories_list = row['categories']
    except:
        categories_list = row['venue.categories']

    if len(categories_list) == 0:
        return None
    else:
        return categories_list[0]['name']
```

```
new_df['categories'] = new_df.apply(get_category_type, axis=1)

new_df.columns = [column.split('.')[1] for column in new_df.columns]

new_df.head()
```

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	name	categories	address	cc	city	country	crossStreet	distance	formattedAddress
0	Hotel & Spa Getsemaní	Hotel	Calle 8 # 10-35	CO	Villa de Leiva	Colombia	NaN	496	[Calle 8 # 10-35, Villa De Leyva, Boyacá, Colo...
1	Elea Spa - Hotel & Spa Getsemaní	Spa	Calle 8 # 10-35	CO	Villa de Leiva	Colombia	NaN	497	[Calle 8 # 10-35, Villa De Leyva, Boyacá, Colo...
2	Hotel Plaza Mayor	Hotel	Calle 10 7-31	CO	Villa de Leiva	Colombia	NaN	87	[Calle 10 7-31, Villa de Leyva, Boyacá, Boyacá...
3	Hotel San Antonio	Hotel	Calle 8	CO	Villa de Lleyva	Colombia	Carrera 11	159	[Calle 8 (Carrera 11), Villa de Lleyva, Boyacá...
4	Hotel Mesón de los Virreyes	Hotel	NaN	CO	NaN	Colombia	NaN	239	[Boyacá, Colombia]

```
new_df= new_df.drop(['cc', 'city', 'country', 'crossStreet', 'distance', 'formattedAddress',\
                    'labeledLatLngs', 'id'], axis=1)

new_df
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	name	categories	address	lat	lng	postalCode	state
0	Hotel & Spa Getsemaní	Hotel	Calle 8 # 10-35	5.633064	-73.527990	NaN	Boyacá

	name	categories	address	lat	lng	postalCode	state
1	Elea Spa - Hotel & Spa Getsemaní	Spa	Calle 8 # 10-35	5.633200	-73.528011	NaN	Boyacá
2	Hotel Plaza Mayor	Hotel	Calle 10 7-31	5.634088	-73.524222	NaN	Boyacá
3	Hotel San Antonio	Hotel	Calle 8	5.632360	-73.522994	NaN	Boyacá
4	Hotel Mesón de los Virreyes	Hotel	NaN	5.634974	-73.521820	NaN	Boyacá
5	hotel Y centro de convenciones casa de los fun...	Hotel	1km Via Guanani	5.633522	-73.524962	NaN	Boyacá
6	Hotel Boutique La Espanola	Hotel	Calle 12 No. 11 - 06	5.634637	-73.525069	NaN	Boyacá
7	Hotel Villa Paz	Ski Lodge	Crr 11a no. 12 - 27	5.635055	-73.525024	154001	Boyacá
8	Hotel Casa Cantabria	Bed & Breakfast	NaN	5.632814	-73.525732	NaN	Boyacá
9	Hotel Antonio Nariño	Bed & Breakfast	Villa De Leyva	5.631885	-73.524600	NaN	Boyacá
10	Hotel Plazuela de San Agustín	Hotel	NaN	5.634718	-73.521240	NaN	Boyacá
11	Hotel El Peregrino de la Villa	Bed & Breakfast	NaN	5.634078	-73.526009	NaN	NaN
12	Hotel Aqua Vitae	Hotel	NaN	5.634297	-73.528244	154001	Boyacá
13	Hotel Campanario de la Villa	Hotel	NaN	5.635248	-73.525080	NaN	NaN
14	Hotel Miracle	Hotel	Carrera 11 #9-41	5.633403	-73.526484	NaN	Boyacá
15	Hotel Fontana Plaza	Hotel	Carrera 9 #9-27	5.631549	-73.525750	154001	Boyacá
16	hotel villa roma	Bed & Breakfast	NaN	5.631480	-73.525779	NaN	NaN
17	Hotel Mansión la Toscana	Bed & Breakfast	NaN	5.632132	-73.520461	NaN	NaN
18	Hotel Villa del Angel	Bed & Breakfast	NaN	5.633472	-73.526970	NaN	NaN
19	Hotel Andrés Venero De Leyva	Bed & Breakfast	Avenida Circunvalar Calle 11 Esquina	5.635077	-73.527659	NaN	Boyacá
20	Hotel Los Frayles	Hostel	Calle 8 9-38	5.631242	-73.526556	NaN	Boyacá
21	Hotel Bahia Olivo	Hotel	NaN	5.633185	-73.527684	NaN	NaN
22	Hotel spa bahía olivo	Hotel	NaN	5.633118	-73.527534	NaN	NaN
23	Hotel la Hormiga	Bed & Breakfast	Cra 9 # 7-59	5.630166	-73.526533	NaN	Boyacá

	name	categories	address	lat	lng	postalCode	state
24	Hotel Getzemani	Hotel	Calle 8 villa de leyva	5.632824	-73.528074	NaN	Boyacá Dept
25	Hotel Santa Viviana	Hotel	Diagonal 12 # 8a-76	5.634710	-73.527916	NaN	Boyacá
26	Hotel Andres Venero de Leyva	Hotel	NaN	5.635013	-73.527551	NaN	NaN
27	hotel Abadia de la Villa	Bed & Breakfast	Calle 8 10-97	5.633635	-73.527911	154001	Boyacá
28	Hotel Abahunza	Resort	NaN	5.633583	-73.527856	NaN	NaN
29	hotel las orquideas de la villa	Hotel	Calle 12 # 10-11	5.636492	-73.527236	NaN	NaN
30	Hotel Campanario Real	Boarding House	NaN	5.637163	-73.526375	NaN	NaN
31	Hotel Arcadia Colonial	Hotel	Calle 8 # 10-19B	5.634379	-73.528293	NaN	Boyacá
32	Hotel Marques De San Luis	Hotel	Circunvalacion 8-58	5.634897	-73.528138	NaN	Boyacá
33	El Solar Hotel	Bed & Breakfast	Call 10a # 10-60	5.633351	-73.525843	00000	Boyacá
34	Hotel Casa Real Villa de Leyva	Hotel Pool	Calle 17#10-14	5.637400	-73.520202	NaN	Boyacá
35	Hotel Estancia Los Olivos	Bed & Breakfast	NaN	5.632955	-73.528230	NaN	Boyacá
36	posada de la villa hotel	Hotel	Calle 14 carrera 8	5.633887	-73.521225	NaN	Boyacá
37	Hotel Villa Palva	Hotel	cra 9a #7 37	5.630548	-73.527710	NaN	Boyacá
38	Hotel Boutique Villa Roma	Hotel	Calle 8 #10 -166	5.634107	-73.528102	058	Boyacá
39	Bar Hotel Plaza Mayor	Beer Garden	NaN	5.629856	-73.524243	NaN	NaN
40	MiniHotel	Hostel	Calle 10 A # 10 - 29	5.632720	-73.521250	NaN	Boyacá
41	Molino La Mesopotamia	Hotel	NaN	5.636165	-73.518837	NaN	Boyacá

```
array= ['Hotel']
df_hotel= new_df.loc[new_df['categories'].isin(array)]
df_hotel
```

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	name	categories	address	lat	lng	postalCode	state
0	Hotel & Spa Getsemaní	Hotel	Calle 8 # 10-35	5.633064	-73.527990	NaN	Boyacá
2	Hotel Plaza Mayor	Hotel	Calle 10 7-31	5.634088	-73.524222	NaN	Boyacá
3	Hotel San Antonio	Hotel	Calle 8	5.632360	-73.522994	NaN	Boyacá
4	Hotel Mesón de los Virreyes	Hotel	NaN	5.634974	-73.521820	NaN	Boyacá
5	hotel Y centro de convenciones casa de los fun...	Hotel	1km Via Guanani	5.633522	-73.524962	NaN	Boyacá
6	Hotel Boutique La Espanola	Hotel	Calle 12 No. 11 - 06	5.634637	-73.525069	NaN	Boyacá
10	Hotel Plazuela de San Agustín	Hotel	NaN	5.634718	-73.521240	NaN	Boyacá
12	Hotel Aqua Vitae	Hotel	NaN	5.634297	-73.528244	154001	Boyacá
13	Hotel Campanario de la Villa	Hotel	NaN	5.635248	-73.525080	NaN	NaN
14	Hotel Miracle	Hotel	Carrera 11 #9-41	5.633403	-73.526484	NaN	Boyacá
15	Hotel Fontana Plaza	Hotel	Carrera 9 #9-27	5.631549	-73.525750	154001	Boyacá
21	Hotel Bahia Olivo	Hotel	NaN	5.633185	-73.527684	NaN	NaN
22	Hotel spa bahía olivo	Hotel	NaN	5.633118	-73.527534	NaN	NaN
24	Hotel Getzemani	Hotel	Calle 8 villa de leyva	5.632824	-73.528074	NaN	Boyacá Dept
25	Hotel Santa Viviana	Hotel	Diagonal 12 # 8a-76	5.634710	-73.527916	NaN	Boyacá
26	Hotel Andres Venero de Leyva	Hotel	NaN	5.635013	-73.527551	NaN	NaN
29	hotel las orquideas de la villa	Hotel	Calle 12 # 10-11	5.636492	-73.527236	NaN	NaN
31	Hotel Arcadia Colonial	Hotel	Calle 8 # 10-19B	5.634379	-73.528293	NaN	Boyacá
32	Hotel Marques De San Luis	Hotel	Circunvalacion 8-58	5.634897	-73.528138	NaN	Boyacá
36	posada de la villa hotel	Hotel	Calle 14 carrera 8	5.633887	-73.521225	NaN	Boyacá
37	Hotel Villa Palva	Hotel	cra 9a #7 37	5.630548	-73.527710	NaN	Boyacá
38	Hotel Boutique Villa Roma	Hotel	Calle 8 #10 -166	5.634107	-73.528102	058	Boyacá

	name	categories	address	lat	lng	postalCode	state
41	Molino La Mesopotamia	Hotel	NaN	5.636165	-73.518837	NaN	Boyacá

```
search_query = 'Restaurant'
radius = 10000
```

```
url = 'https://api.foursquare.com/v2/venues/search?client_id={}&client_secret={}&ll={},{}&v={}&query={}&radius={}&limit={}&offset={}'
url
```

```
'https://api.foursquare.com/v2/venues/search?client_id=Y4KMS3PAB54UJZYMXWD3FT05P04QQJ15HFQJNH3Q4YJGKZJM&client_secret=0U1M4WVB1XD50GXWYSSYZ0AJTE3QZUJGT4ZXEN3ZZZUCDX10&ll=5.6336805, -73.523548&v=20200418&query=Restaurant&radius=10000&limit=50'
```

```
result_restaurant = requests.get(url).json()
```

```
venue_restaurant = result_restaurant['response']['venues']
```

```
Restaurant_df = json_normalize(venue_restaurant)
Restaurant_df.head()
```

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	categories	hasPerk	id	location.address	location.cc	location.name
0	{'id': '4bf58dd8d48988d1ca941735', 'name': 'P...	False	4f370d08e4b0d3ab511ef894	Villa de leyva	CO	M...
1	{'id': '52e81612bcb57f1066b7a00', 'name': 'C...	False	534ead7d498e662b28a28cbd	NaN	CO	M...
2	{'id': '4bf58dd8d48988d10c941735', 'name': 'F...	False	4ef607e20e61a0846c52c3d6	NaN	CO	V...
3	{'id': '4bf58dd8d48988d1c4941735', 'name': 'R...	False	50edd8a9e4b037265a58382e	Cr10 No 11-50	CO	V...
4	{'id': '4bf58dd8d48988d10c941735', 'name': 'F...	False	4e8798c630f83936723c7bbc	Carrera 9 13-51	CO	V...

```
Restaurant_new_columns = ['name', 'categories'] + [col for col in Restaurant_df.columns if col.startswith('location')]
new_df_restaurant = Restaurant_df.loc[:, Restaurant_new_columns]
```

```
def get_category_type(row):
```



```

try:
    categories_list3 = row['categories']
except:
    categories_list3 = row['venue.categories']

if len(categories_list3) == 0:
    return None
else:
    return categories_list3[0]['name']

new_df_restaurant['categories'] = new_df_restaurant.apply(get_category_type, axis=1)

new_df_restaurant.columns = [column.split('.')[0] for column in new_df_restaurant.columns]

new_df_restaurant.head()

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	name	categories	address	cc	city	country	crossStreet	distance	formattedAddress
0	Restaurante Portales	Pizza Place	Villa de leyva	CO	NaN	Colombia	NaN	33	[Villa de leyva, Colombia]
1	El Santo Restaurante Gourmet	Comfort Food Restaurant	NaN	CO	NaN	Colombia	NaN	32	[Colombia]
2	Restaurante Chez Rémy	French Restaurant	NaN	CO	Villa de Leiva	Colombia	NaN	101	[Villa de Leyva, Boyacá, Colombia]
3	Restaurante Carnes y Olivas	Restaurant	Cr10 No 11-50	CO	Villa de Leiva	Colombia	NaN	130	[Cr10 No 11-50, Villa de Leyva, Boyacá, Colombia]
4	Restaurante Mama Santa	French Restaurant	Carrera 9 13-51	CO	Villa de Leiva	Colombia	NaN	120	[Carrera 9 13-51, Villa de Leyva, Boyacá, Colo...]

```

new_df_restaurant= new_df_restaurant.drop(['cc', 'city', 'country', 'crossStreet', 'distance', 'formattedAddress', 'labeledLatLngs', 'neighborhood', 'id'], axis=1)

new_df_restaurant

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	name	categories	address	lat	Ing	postalCode	state
0	Restaurante Portales	Pizza Place	Villa de leyva	5.633776	-73.523260	NaN	NaN
1	El Santo Restaurante Gourmet	Comfort Food Restaurant	NaN	5.633418	-73.523680	NaN	NaN
2	Restaurante Chez Rémy	French Restaurant	NaN	5.634233	-73.522817	NaN	Boyacá
3	Restaurante Carnes y Olivas	Restaurant	Cr10 No 11-50	5.633534	-73.524718	154001	Boyacá
4	Restaurante Mama Santa	French Restaurant	Carrera 9 13-51	5.634216	-73.522599	154001	Boyacá
5	Los Portales Restaurante	Restaurant	NaN	5.633803	-73.523068	NaN	NaN
6	Restaurante El Caney	Restaurant	NaN	5.634393	-73.521957	NaN	NaN
7	Restaurante Peruano del Carajo	Peruvian Restaurant	NaN	5.634674	-73.525313	NaN	NaN
8	La Romana Restaurante y Pizzeria	Pizza Place	Calle 12# 9- 67	5.633489	-73.524030	NaN	Boyacá
9	Savia Orgánica - Restaurante	Restaurant	NaN	5.633183	-73.523708	NaN	NaN
10	Restaurante La Albahaca	Latin American Restaurant	Villa de Leyva	5.633149	-73.521599	NaN	NaN
11	Restaurante Rincón de Bachué	Restaurant	NaN	5.634648	-73.521396	NaN	NaN
12	Los Arcos Pizzeria Y Restaurante	American Restaurant	NaN	5.633485	-73.524075	NaN	Boyacá
13	Terraza Restaurante Bar	BBQ Joint	NaN	5.634082	-73.523140	NaN	NaN
14	Restaurante Los Kioscos De Los Caciques	Latin American Restaurant	NaN	5.631474	-73.525944	NaN	Boyacá
15	portales restaurante pizzeria y fruteria	Pizza Place	NaN	5.633981	-73.522995	NaN	NaN
16	Restaurante Casa Blanca	Restaurant	NaN	5.632438	-73.521440	NaN	NaN
17	Arcadia Bar Restaurante	Italian Restaurant	calle 13 9-10	5.633889	-73.522909	154001	Boyacá
18	Restaurante Tabú Cocina & Arte	Fast Food Restaurant	Cra 7 N 7b - 49	5.629348	-73.525384	154001	Boyacá
19	Restaurante Tabú	Mexican Restaurant	NaN	5.629294	-73.525210	NaN	NaN
20	Restaurante Tipico	Latin American Restaurant	NaN	5.636462	-73.527466	NaN	Boyacá

	name	categories	address	lat	lng	postalCode	state
21	Restaurante Nueva Granada	Latin American Restaurant	NaN	5.632230	-73.529152	NaN	NaN
22	Savia Tienda Restaurante	Vegetarian / Vegan Restaurant	NaN	5.633287	-73.524289	NaN	Boyacá
23	Antique Restaurante Bar	Restaurant	NaN	5.634315	-73.522640	NaN	Boyacá
24	Frutipicos Restaurante	Restaurant	NaN	5.632583	-73.523247	NaN	NaN
25	Asadero Restaurante Villa Pollo	Restaurant	NaN	5.632136	-73.524646	NaN	NaN
26	Restaurante Rakamandaka	Winery	NaN	5.609699	-73.563677	NaN	NaN
27	Asadero Restaurante Los Pernilotes	BBQ Joint	NaN	5.631307	-73.526990	NaN	NaN
28	al carbon restaurante	Steakhouse	Calle 8	5.634333	-73.528617	NaN	Boyacá
29	Restaurante y Piqueteadero Las Vegas	Cajun / Creole Restaurant	NaN	5.620290	-73.617203	NaN	NaN
30	Restaurante y Piqueteadero Leña y Sabor	South American Restaurant	Carrera 2 #5-40	5.619987	-73.618721	NaN	Boyacá
31	El Tomatino Restaurante Galeria	Restaurant	NaN	5.642480	-73.548108	NaN	NaN
32	Kalahari Restaurante	Restaurant	NaN	5.614637	-73.558307	NaN	Boyacá

```
df_Restaurant = new_df_restaurant.dropna(axis=0, how='any', thresh=None, subset=None, inplace=False)
df_Restaurant
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	name	categories	address	lat	Ing	postalCode	state
3	Restaurante Carnes y Olivas	Restaurant	Cr10 No 11-50	5.633534	-73.524718	154001	Boyacá
4	Restaurante Mama Santa	French Restaurant	Carrera 9 13-51	5.634216	-73.522599	154001	Boyacá
17	Arcadia Bar Restaurante	Italian Restaurant	calle 13 9-10	5.633889	-73.522909	154001	Boyacá
18	Restaurante Tabú Cocina & Arte	Fast Food Restaurant	Cra 7 N 7b - 49	5.629348	-73.525384	154001	Boyacá

```
neighbourhood_df = pd.concat([df_hotel, df_Restaurant], ignore_index=True)
neighbourhood_df
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	name	categories	address	lat	Ing	postalCode	state
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1	Hotel Plaza Mayor	Hotel	Calle 10 7-31	5.634088	-73.524222	NaN	Boyacá
2	Hotel San Antonio	Hotel	Calle 8	5.632360	-73.522994	NaN	Boyacá
3	Hotel Mesón de los Virreyes	Hotel	NaN	5.634974	-73.521820	NaN	Boyacá
4	hotel Y centro de convenciones casa de los fun...	Hotel	1km Via Guanani	5.633522	-73.524962	NaN	Boyacá
5	Hotel Boutique La Espanola	Hotel	Calle 12 No. 11 - 06	5.634637	-73.525069	NaN	Boyacá
6	Hotel Plazuela de San Agustín	Hotel	NaN	5.634718	-73.521240	NaN	Boyacá
7	Hotel Aqua Vitae	Hotel	NaN	5.634297	-73.528244	154001	Boyacá
8	Hotel Campanario de la Villa	Hotel	NaN	5.635248	-73.525080	NaN	NaN
9	Hotel Miracle	Hotel	Carrera 11 #9-41	5.633403	-73.526484	NaN	Boyacá
10	Hotel Fontana Plaza	Hotel	Carrera 9 #9-27	5.631549	-73.525750	154001	Boyacá
11	Hotel Bahia Olivo	Hotel	NaN	5.633185	-73.527684	NaN	NaN
12	Hotel spa bahía olivo	Hotel	NaN	5.633118	-73.527534	NaN	NaN

	name	categories	address	lat	lng	postalCode	state
13	Hotel Getzemani	Hotel	Calle 8 villa de leyva	5.632824	-73.528074	NaN	Boyacá Dept
14	Hotel Santa Viviana	Hotel	Diagonal 12 # 8a-76	5.634710	-73.527916	NaN	Boyacá
15	Hotel Andres Venero de Leyva	Hotel	NaN	5.635013	-73.527551	NaN	NaN
16	hotel las orquideas de la villa	Hotel	Calle 12 # 10-11	5.636492	-73.527236	NaN	NaN
17	Hotel Arcadia Colonial	Hotel	Calle 8 # 10-19B	5.634379	-73.528293	NaN	Boyacá
18	Hotel Marques De San Luis	Hotel	Circunvalacion 8-58	5.634897	-73.528138	NaN	Boyacá
19	posada de la villa hotel	Hotel	Calle 14 carrera 8	5.633887	-73.521225	NaN	Boyacá
20	Hotel Villa Palva	Hotel	cra 9a #7 37	5.630548	-73.527710	NaN	Boyacá
21	Hotel Boutique Villa Roma	Hotel	Calle 8 #10 -166	5.634107	-73.528102	058	Boyacá
22	Molino La Mesopotamia	Hotel	NaN	5.636165	-73.518837	NaN	Boyacá
23	Restaurante Carnes y Olivas	Restaurant	Cr10 No 11-50	5.633534	-73.524718	154001	Boyacá
24	Restaurante Mama Santa	French Restaurant	Carrera 9 13-51	5.634216	-73.522599	154001	Boyacá
25	Arcadia Bar Restaurante	Italian Restaurant	calle 13 9-10	5.633889	-73.522909	154001	Boyacá
26	Restaurante Tabú Cocina & Arte	Fast Food Restaurant	Cra 7 N 7b - 49	5.629348	-73.525384	154001	Boyacá

```
map_villa_de_leyva = folium.Map(location=[latitude, longitude], zoom_start=14)

for lat, lng, name, categories, address in zip(neighbourhood_df['lat'], neighbourhood_df['lng'],
                                              neighbourhood_df['name'], neighbourhood_df['categories'],\
                                              neighbourhood_df['address']):
    label = '{}', '{}'.format(name, address)
    label = folium.Popup(label, parse_html=True)
    folium.CircleMarker(
        [lat, lng],
        radius=5,
        popup=label,
        color='blue',
        fill=True,
        fill_color='blue',
        fill_opacity=0.7,
        parse_html=False).add_to(map_toronto)

map_villa_de_leyva
```