# Attractions in Jerusalem City

## Introduction/Business Problem

My project's goal is to help create a tour guide for the city of Jeruslam, Israel. My goal is to cluster the venues in the city into categories and help someone that don't know this city very well to enjoy the trip to the fullest. It can be useful to Jerusalem city council, tourists and to travel guides.

## Data

The data I will be using is the data of the venues in Jerusalem - the name, and the category of each venue. I will be going to cluster the venues using the category. The source of the data is Foursquare.
One example of what I can get from this data is a graph that shows the distribution of the venues by their category.

## Methodology

First I got the data from Foursquare website - json file that includes data of one hundred venues in Jerusalem city. Then, the data was formatted to pandas data frame and cleaned from NaN values.
Then, two outputs created:

1. List of all venues and their categories.
2. Pie chart that shows the distribution of venues' categories - In this graph, I chose to show only the common categories - those who appear more than two times.

## Results

- We got data of one hundred venues - not all of the venues in the city, so it does not fully represent all the venues in the city but I guess it gives a good sense of the trends.
- First result is the list of the venues. Here is the first five venues:

| | name | categories | lat | lng |
|---|---|---|---|---|
| 0 | King David Hotel Jerusalem | Hotel | 31.774344 | 35.222368 |
| 1 | Café Yehoshua (קפה יהושע) | Café | 31.772894 | 35.214717 |
| 2 | Talbia Wine Bar | Wine Bar | 31.768507 | 35.215987 |
| 3 | Hansen House (בית הנסן) | Community Center | 31.767722 | 35.216951 |
| 4 | Independence Park (גן העצמאות) | Park | 31.777131 | 35.219459 |

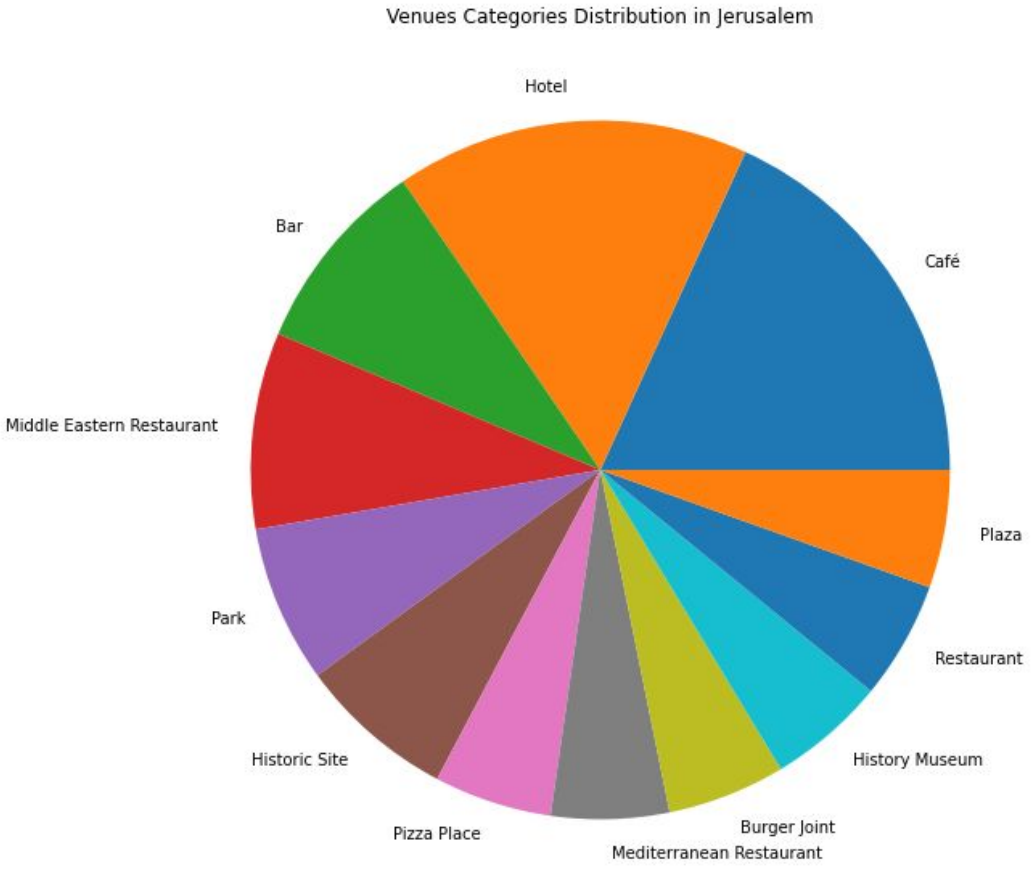
- The next output is the distribution of the venues' categories:

| | Category | number of times |
|---|---|---|
| 0 | Café | 10 |
| 1 | Hotel | 9 |
| 2 | Bar | 5 |
| 3 | Middle Eastern Restaurant | 5 |
| 4 | Park | 4 |
| 5 | Historic Site | 4 |
| 6 | Pizza Place | 3 |
| 7 | Mediterranean Restaurant | 3 |
| 8 | Burger Joint | 3 |
| 9 | History Museum | 3 |
| 10 | Restaurant | 3 |
| 11 | Plaza | 3 |
| 12 | Mountain | 2 |
| 13 | Sculpture Garden | 2 |
| 14 | Shopping Mall | 2 |
| 15 | Coffee Shop | 2 |

| | | |
|---|---|---|
| **16** | Dessert Shop | 2 |
| **17** | Art Museum | 2 |
| **18** | Neighborhood | 2 |
| **19** | Bakery | 2 |
| **20** | Market | 2 |
| **21** | Indie Movie Theater | 2 |
| **22** | Theater | 2 |
| **23** | Hostel | 2 |
| **24** | Italian Restaurant | 2 |
| **25** | Synagogue | 1 |
| **26** | Church | 1 |
| **27** | Pedestrian Plaza | 1 |
| **28** | Juice Bar | 1 |
| **29** | Ice Cream Shop | 1 |
| **30** | Beer Bar | 1 |
| **31** | Cocktail Bar | 1 |
| **32** | Monument / Landmark | 1 |
| **33** | Community Center | 1 |
| **34** | Seafood Restaurant | 1 |
| **35** | Scenic Lookout | 1 |
| **36** | Asian Restaurant | 1 |
| **37** | Movie Theater | 1 |
| **38** | Wine Bar | 1 |
| **39** | Falafel Restaurant | 1 |
| **40** | Soup Place | 1 |
| **41** | Sushi Restaurant | 1 |
| **42** | Brewery | 1 |
| **43** | Lebanese Restaurant | 1 |

- We can see that the most common categories are cafe (10 venues) and hotel (9 venues).

- As a city with a varied population - in their ethnic origin, religion, age and so on - we can see a lot of types of venues - 43 categories for only one hundred venues!
- In the next figure, we can see pie chart that display the distribution of the common categories - those that appear at least three times.




## Conclusion

In this work we used location data of venues in Jerusalem from the website Foursquare. We got the data, cleaned it and processed it with python. The main conclusions are that this city is very varied in venues categories and the most common venues are cafes and hotels. We got some data that can help tourists enjoy their journey in Jerusalem. The city has a lot to offer to tourists!