



THE MOST SUITABLE PLACE TO
OPEN UP A CAFE IN ISTANBUL



INTRODUCTION

- Opening up a cafe in Istanbul might be difficult, but deciding to do so is even more difficult. You must have great strategies and come up with great ideas to successfully open up your cafe.
- While doing so you can count endless challenges, and this project aims to solve some of these challenges you may encounter.

BUSINESS PROBLEM

- Opening up a cafe in Istanbul might be difficult, but deciding to do so is even more difficult. There are so many cafes in Istanbul, therefore if you open up your cafe in a place full of cafes, you might not be successful.
- Likewise, if you open up your cafe in a place that has no attraction, you still might fail.
- The aim of this project is to show you the best places to open up your cafe.

DESIRED OUTCOME

- The best outcome of this project would be to see;
- - The most popular venues in every borough, which are cafes mostly
- - The places full of cafes, in order to avoid those places
- - The places that have enough attraction, not completely empty
- - The best place to open up your cafe

DATA ACQUISITION

- The sources that are used in this project are:
 - - atlasbig.com
 - - geopy client
 - - Foursquare API

DATA PREPARATION

- Boroughs and their information like are acquired from atlasbig.com
- Geographic coordination information of the boroughs are acquired from geopy client
- Most popular venue categories are acquired from Foursquare API
- Maps are created by using Folium library

METHODOLOGY

- After scraping borough information into a DataFrame from the source web site, each one's latitude and longitude information and were added to the DataFrame. This far, all processes were made by Python's Pandas library.
- By using a Foursquare app with the help of app's client ID and client secret, the most popular venue type of each borough were added to the DataFrame. Then, a map was created in order to show the boroughs.

METHODOLOGY

- Since the standard k-means algorithm cannot be directly applicable to categorical data, an encoding process was done to the DataFrame and all values were turned into numeric values. Then the DataFrame was fit into a k-means clustering model and results of each borough were added to the DataFrame.
- Finally, a map that is based on the cluster and location information was created and shown.

RESULT AND CONCLUSION

- Venues of boroughs can be seen in the final map. All of them were located and clustered previously. Venues and boroughs close to each other can be observed easily.
- We can conclude that opening up a cafe in a borough which is not too close or too away from others could be the best option. According to the map, new cafes in the light blue cluster could be successful.

