

Comparing Neighborhoods in Dubai and Doha

Data

The project goal is to cluster similar neighborhoods in Dubai and Doha leveraging **Foursquare location data**. With the final report, people will be able to easily find neighborhoods with the characteristics they are looking for in both cities.

Using Foursquare API and some Data Science tools and techniques, we can segment and compare neighborhoods of the two cities.

To get a detailed final report, we will follow the steps below in a Jupyter Notebook:

1) Using Requests and BeautifulSoup packages to web scrape the wikipedia pages of Dubai and Doha, we get a list of their neighborhoods and store it into a Pandas dataframe.

a) Doha neighborhoods will be web scraped from wikipedia page [Communities in Dubai](#)

The screenshot shows the Wikipedia page titled "List of communities in Dubai". It features a table of neighborhoods categorized into "Deira and eastern Dubai" and "Bur Dubai and western Dubai".

Neighbourhoods and communities in Dubai	
Deira and eastern Dubai	Abu Hail · Al Baraha · Al Buteen · Al Dhagaya · Al Garhoud · Al Hamriya Port · Al Karama · Al Khabisi · Al Mamzar · Al Mizhar · Al Muraqqabat · Al Murar · Al Muteena · Al Nahda · Al Qusais · Al Ras · Al Rashidiya · Al Rigga · Al Sabkha · Al Twar · Al Waheda · Al Warqaa · Ayal Nasir · Dubai International Airport · Hor Al Anz · Mirdif · Muhaisnah · Nad Al Hammar · Nad Shamma · Naif · Port Saeed · Rigga Al Buteen · Umm Ramool · Warisan · Al Amardhi
Bur Dubai and western Dubai	Al Bada · Al Barsha · Al Hamriya · Al Hudaiba · Al Jaddaf · Al Jafilia · Al Karama · Al Kefaf · Al Manara · Al Mankhool · Al Markada · Al Quoz · Al Rifa · Al Safa · Al Satwa · Al Shindagha · Al Souk Al Kabir · Al Sufouh · Al Wasi · Bu Kadra · Business Bay · Dubai Marina · Emirates Hills · Downtown Dubai · Dubai International City · Jebel Ali · Jumeirah · Jumeirah Islands · Jumeirah Lake Towers · Nad Al Sheba · Oud Metha · Port Rashid · Ras Al Khor · Ras Al Khor Industrial Area · Trade Centre 1 · Trade Centre 2 · Umm Al Sheif · Umm Hurair · Umm Suqeim · Zabeel

b) Doha neighborhoods will be web scraped from wikipedia page [Communities in Doha](#)

The screenshot shows the Wikipedia page titled "List of communities in Doha". It includes a table with data on communities, their area, population, and population density.

Community	Area(km ²)	Population (2010)	Population density(/km ²)
Al Bidda	0.8 km ²	1,067	1,398.0/km ²
Al Dafna	1.1 km ²	19	17.7/km ²
Ad Dawhah al Jadidah	0.5 km ²	13,059	27,358.5/km ²

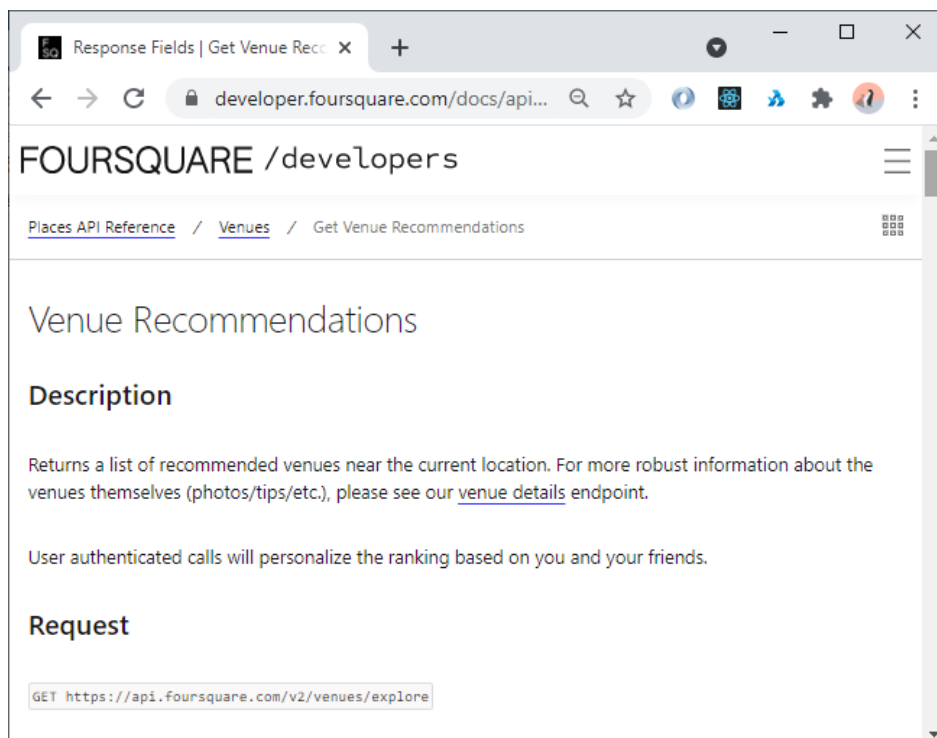
c) Each neighborhood has a link to its own wikipedia page, which allow us to web scrape the latitude and the longitude coordinates.



3) Once we have the latitude and the longitude coordinates, we call Foursquare API to explore each neighborhood and list the most common venues of them and group the information into a new Pandas dataframe.

Foursquare returns a list of venues near those coordinates, with information about them, like category. That information is very important for our next step (cluster neighborhoods)

The Foursquare API's documentation that allow us to explore a given location can be check [here](#).



4) Having the dataframe with venues of each neighborhood, we use K-Means method, from scikit-learn library, to cluster neighborhoods based on their similarities.

The final result will help the person who is moving from Dubai to Doha, and vice versa, to analyze the neighborhoods and find the one that best suits his or her needs and wishes.