

Restaurant Data Analysis

Introduction: Business Problem

One Restaurant Chain business group want to start to restaurant branches in different part Abu Dhabi City in United Arab Emirates. This Project will be providing Business Group, group of cities which highest concentration of different types of restaurants and each city which type of restaurant are common in ranking.

Based on the shortlisted cities suggested by the Business Group, Location data and using data science tools we will explore clusters of location based on different restaurant types in its neighborhoods and the 10 most common restaurant types with rank in each city will be identified

Data

Following Datasets will be used for the above business problem:

➤ List of Shortlisted cities

This will be list of cities in Abu Dhabi will be provided by Client in Excel format

➤ Using Geopandas library find the coordinates of cities

The cities location details will be collected using geocode function in geopandas library

Data attributes collected as part of exercise will be

- City Name
- Address
- Latitude
- Longitude

Index	Place	Address	latitude	longitude
0	Al Aman	Al Aman Abu Dhabi	54.4266	24.432
1	Al Dhafrah	Al Dhafrah Abu Dhabi	54.3694	24.4761
3	Al Karama	Al Karama Abu Dhabi	55.3048	25.2444
4	Al Khubeirah	Al Khubeirah Abu Dhabi	54.3368	24.4652
6	Al Madina	Al Madina Abu Dhabi	54.4907	24.3409
7	Al Maryah Island	Al Maryah Island Abu Dh...	54.3902	24.5021
8	Al Manhal	Al Manhal Abu Dhabi	54.366	24.4666

➤ Using foursquare APIs find the venues in each city and its details required for the analysis

Foursquare APIs will be called with necessary location data which collected from the previous step and collect venues (restaurants) and their category information.

- Data Attributes are
 - City Name
 - Category Name
 - Venue Name
 - Latitude
 - Longitude
 - Neighborhood

Sample data as follows

Index	Place	categoryname	name	location.lng	location.lat
2	Al Aman	Lebanese Restaurant	Mosaic (موزاييك)	54.4362	24.4314
7	Al Aman	Gluten-free Restaurant	ZeroFat	54.4331	24.4321
11	Al Aman	Yemeni Restaurant	East Yeman Restaurant	54.4357	24.4339
22	Al Aman	Asian Restaurant	UAE AbuDhabi	54.4342	24.4321
29	Al Aman	Indian Restaurant	Hanin Oasis	54.4349	24.4327
31	Al Aman	Chinese Restaurant	Oasis Garden Chinese Resta...	54.4313	24.4336
37	Al Aman	Japanese Restaurant	Samurai	54.4348	24.4303
39	Al Aman	Indian Restaurant	Indian Coffee House	54.4349	24.4331