Relationship Between Coastal Areas and Food Sector in Tourism-driven Cities/Case Study Turkey

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Background of the Problem

- Turkey has several cities where the local economy is driven by tourism. With that said, in such cities restaurants and food sector is also seasonally driven by tourism.
- Accordingly, the location of a restaurant in the city is an imperative determinant in the profit margin of a restaurant.
- For exploration, the study uses three coastal tourism-driven cities from Turkey: Istanbul, Izmir and Antalya. While Istanbul is not technically a tourism-driven economy model, being the sixth mostly visited city in the world makes it worth to explore.
- Backing up such a relationship and determining accurate locations with the highest profit margin would be critical for restaurant-owners who would like to expand or any investor that would like to enter the market.
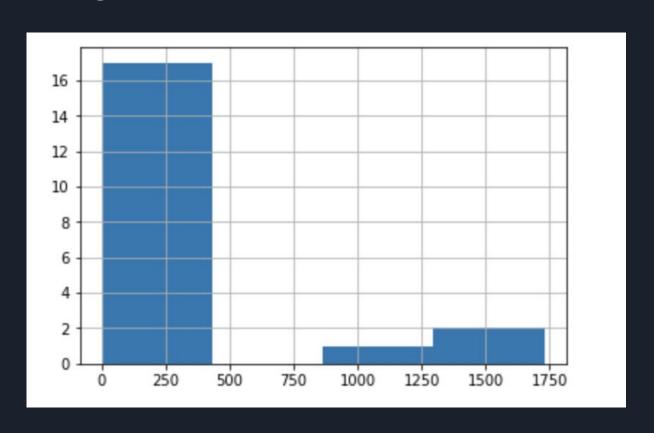
Data Acquisition and Preperation

- For this report, the Foursquare API is utilized to pull the following location data on restaurants in Istanbul, Izmir and Antalya, Turkey.
  - Venue Name
  - Venue
  - Venue Location
  - Venue Category
  - Count of Likes
- For the purpose of the analysis, we queried the closest 3000 venus to the geolocation of the cities within 30 km radius. The main problem with the data was the fact that API queried all the venues within the radius, not only the restaurants.
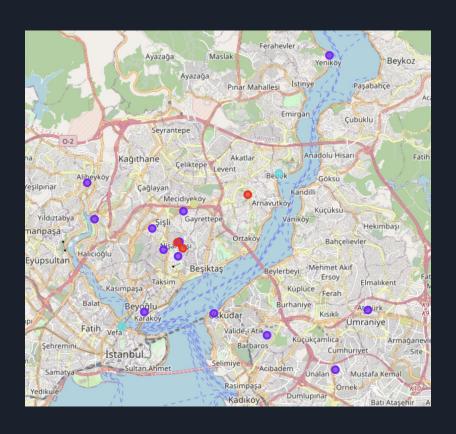
- Then again using the API, the number of likes for the restaurants data was acquired and added to the respective tables. Then, using the quartiles and the median of each respective city's number of likes, restaurants are clustered into four categories as following:
  - Great (Great)
  - Average (avg avg)
  - Below Average (blw avg)
  - Poor (poor)

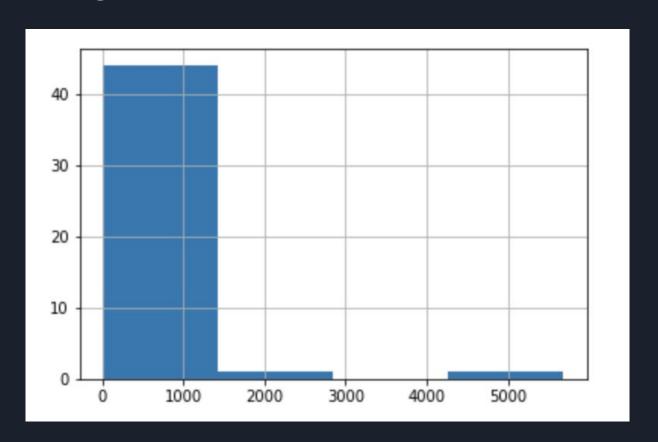|	name	id	categories	lat	lng	total likes	total likes_cat	categories_new
4	Etiler Gurme Kasabı & Izgara	59dfb5c186bc495799852e2c	Steakhouse	41.079847	29.044947	32	below avg	restaurants
10	Byulus Steakhouse&Burger	59bd56c92079551e2b7eb007	Steakhouse	41.071683	29.028886	53	avg avg	restaurants
33	Match Cafe	4b5c7a03f964a520b03129e3	Restaurant	41.065213	28.995525	1537	great	restaurants
34	Jaja Istanbul	5d8e0b5ba67bc000081c3e1d	Café	41.067860	29.001080	19	poor	restaurants
43	Hümaliva Çikolata & Kahve	55bcf47d498e08d9c9742a5b	Chocolate Shop	41.053195	28.993723	1116	great	restaurants

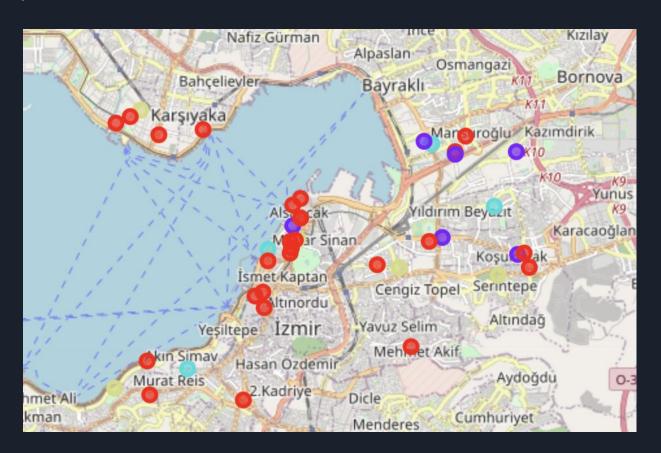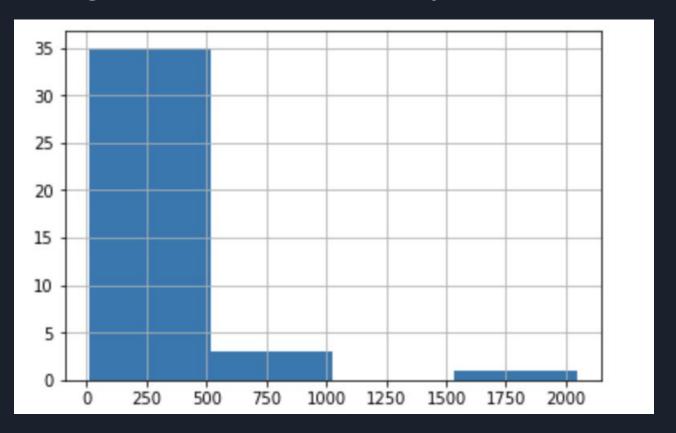# Histogram of Likes of Istanbul
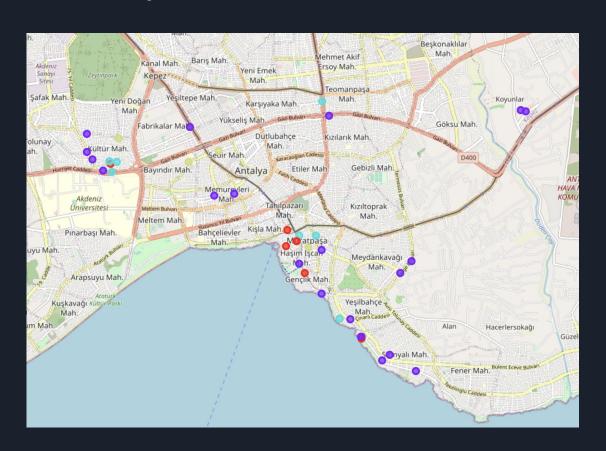
Map of Istanbul

Histogram of Likes of Izmir

Map of Izmir

Histogram of Likes of Antalya

Map of Antalya

Conclusion and Future Direction

- This study should be considered as an indicator acknowledging that there is a positive correlation between proximity to coast and favorableness of restaurants in tourism-driven cities.
- However, there are still significant variables that could not be predicted by the analysis made in this study. This study could be reference to create a model assessing business decision in the food sector of touristic coastal cities.
- To support such an investment decision, there must be massive data available to analyse from the restaurants location to text algorithms to go over the review and detect whether there are any reviews regarding its location or view.
- Moreover, reliability of the likes from Foursquare as a success indicator is another question to keep in the mind since less likes does not necessarily indicate that the restaurant is disliked.