Capstone Project - The Battle of Neighborhoods

Introduction/ Business Problem:

> **Finding new location for café shop in Mumbai city.**

The city of Mumbai consists of a large number of coffee shop, restaurants, but still there is always scope for new ones. The total area of Mumbai is 603.4 km^2 (233 sq mi).Of this, the island city spans 67.79 km^2 (26 sq mi).and Mumbai was the second most populous city in India after Delhi and the seventh most populous city in the world with a population of 19.98 million. As per Indian government population census of 2011.

Finding a suitable location for it to flourish is the most important factor for a coffee shop. It has to be set up in a location where one can attract a good crowd as well as it must be located in an area where there is little or no competition.
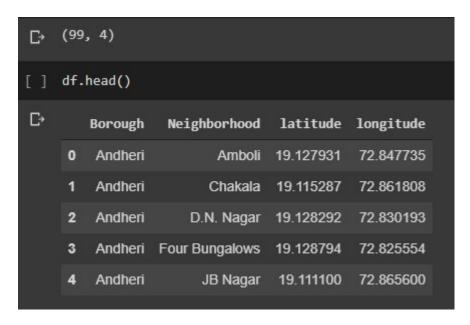
The Goal of this problem is to find a location that suits the below criteria

1) A location that has many restaurants in the vicinity like (Indian, South Indian).
2) A location that has no or few café coffee, as this will ensure that there very little competition with other competitors.

Data:

The data that will be used in these projects is a csv file having data related to all neighborhoods in the city of Mumbai.

File data collected from https://en.wikipedia.org/wiki/List_of_neighbourhoods_in_Mumbai using this URL.

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(99, 4)
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df.head()
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	Borough	Neighborhood	latitude	longitude
0	Andheri	Amboli	19.127931	72.847735
1	Andheri	Chakala	19.115287	72.861808
2	Andheri	D.N. Nagar	19.128292	72.830193
3	Andheri	Four Bungalows	19.128794	72.825554
4	Andheri	JB Nagar	19.111100	72.865600

We explore the neighborhoods using Foursquare API to find the avenues within 500 meters of each neighborhood.

The Foursquare API that will be used to explore the neighborhoods is https://api.foursquare.com/v2/venues/explore. This API returns json response which will be transformed into a Data Frame, taking only the required details into consideration.

Target Audience:
To recommend the correct location, XYZ Company Ltd has appointed me to lead of the Data Science team. The objective is to locate and recommend to the management which neighborhood of Mumbai city will be best choice to start a café. The Management also expects to understand the rationale of the recommendations made.

This would interest anyone who wants to start a new café in Mumbai city.

Success Criteria:

The success criteria of the project will be a good recommendation of borough/Neighborhood choice to XYZ Company Ltd based on Lack of such café in that location and nearest sources of customer.