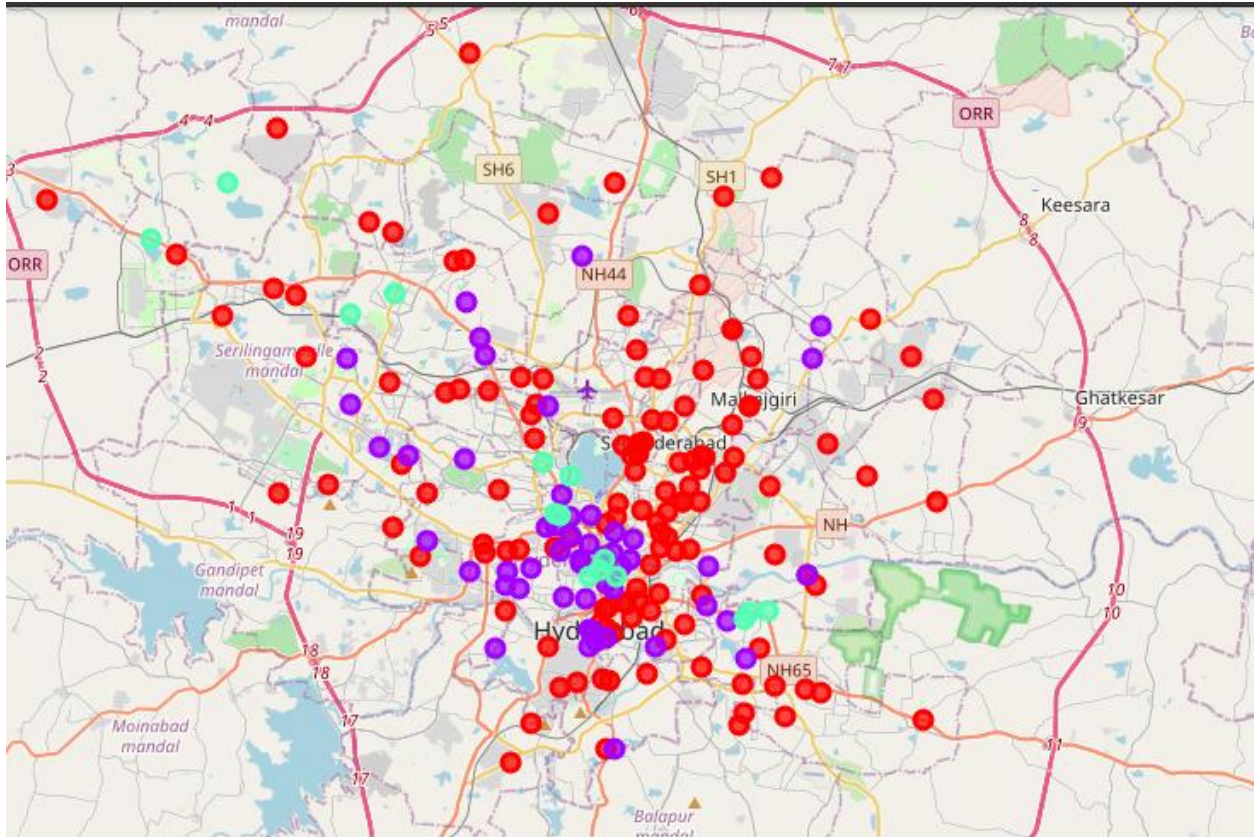# Coursera Capstone Project

The Battle of Neighborhoods – Hyderabad, India

Identifying lucrative neighborhoods in Hyderabad set up a restaurant

Data Requirements Section

Created By: Neha Madnekar

Data Requirements

This section has a total of four parts to represent all the data requirements that were fulfilled:

1. **Neighborhood Data**
2. **Geolocation Data**
3. **Venue Data**
4. **Data Visualization**

1. Neighborhood Data:

Hyderabad has many neighborhoods. The dataset with the list of all the localities in Hyderabad can be found on Wikipedia. There were total of 200 neighborhoods found in Hyderabad when the data from this Wikipedia dataset was fetched in the format shown below:

Link: https://en.wikipedia.org/wiki/Category:Neighbourhoods_in_Hyderabad,_India

	Neighborhood
0	A. C. Guards
1	A. S. Rao Nagar
2	Abhyudaya Nagar
3	Abids
4	Adibatla
5	Adikmet
6	Afzal Gunj
7	Aghapura
8	Aliabad, Hyderabad
9	Alijah Kotla

2. Geolocation Data:

There was no latitude and longitude data found on the page. Therefore, the python package – Geocoder was used to fetch and map the neighborhoods to their respective latitudes and longitudes. These details were then transformed into a Data Frame with the format shown below:

	Neighborhood	Latitude	Longitude
0	A. C. Guards	17.395015	78.459812
1	A. S. Rao Nagar	17.411200	78.508240
2	Abhyudaya Nagar	17.337650	78.564140
3	Abids	17.389800	78.476580
4	Adibatla	17.235790	78.541300
...	...	...	...
195	Secunderabad	17.442000	78.501920
196	Serilingampally	17.482160	78.323000
197	Shah-Ali-Banda	17.357390	78.473200
198	Shahran Market	17.364890	78.476290
199	Shanker Mutt	17.399817	78.507919

3. Venue Data

Next step was to fetch the details of the venues each of these neighborhoods using the Foursquare API. The contents of the dataset namely – Venue, Venue Latitude, Venue Longitude, Venue Category. A total of about 180 venues were extracted using the Foursquare API. A data frame was then created mapping all the venues against the neighborhoods in the format below.

	Neighborhood	Latitude	Longitude	VenueName	VenueLatitude	VenueLongitude	VenueCategory
0	A. C. Guards	17.395015	78.459812	Cafe Niloufer & Bakers	17.399715	78.462881	Café
1	A. C. Guards	17.395015	78.459812	Subhan Bakery	17.392412	78.464712	Bakery
2	A. C. Guards	17.395015	78.459812	Nizam club	17.403221	78.468729	Lounge
3	A. C. Guards	17.395015	78.459812	Prince Hotel	17.394736	78.442410	Indian Restaurant
4	A. C. Guards	17.395015	78.459812	Cream Stone Concepts	17.404284	78.481458	Ice Cream Shop

4. Data Visualization:

Python's package folium was then used to superimpose this data onto the map of Hyderabad