

Introduction/Business Problem:

Mumbai is a city known for its nightlife with loads of popular venues spread across the city which are frequented by youngsters, party goers and celebrities alike. An entrepreneur is interested in starting a venture in this lucrative space and wants to open a Lounge/Gastropub in the city. He would like to identify an appropriate location in the city to start this venture based on the venues in the locality and their popularity. This will form our business problem and we will use data from Foursquare API and other sources to explore the Nightlife venues in city to arrive at an appropriate location.

Data Used:

- We will use the dataset obtained from website <http://creativecommons.org/licenses/by/3.0/> which contains the latitude longitude data for India at a pincode level. We will subset the above dataset in order to obtain latitude & longitude only for Mumbai at a pincode level which is our area of interest for this exercise.

This is how the data will look after importing:

	postal code	Neighborhood	State	District	latitude	longitude
0	400001	Mumbai G.P.O.	Maharashtra	Mumbai	18.938536	72.836334
1	400001	Bazargate	Maharashtra	Mumbai	18.938536	72.836334
2	400001	Town Hall (Mumbai)	Maharashtra	Mumbai	18.938536	72.836334
3	400001	Tajmahal	Maharashtra	Mumbai	18.938536	72.836334
4	400001	Stock Exchange	Maharashtra	Mumbai	18.938536	72.836334
5	400001	M.P.T.	Maharashtra	Mumbai	18.938536	72.836334
6	400002	Kalbadevi	Maharashtra	Mumbai	18.948366	72.825935
7	400002	S. C. Court	Maharashtra	Mumbai	18.948366	72.825935
8	400002	Ramwadi	Maharashtra	Mumbai	18.948366	72.825935
9	400002	Thakurdwar	Maharashtra	Mumbai	18.948366	72.825935

As seen above, multiple localities have a common pincode. We will combine this data at a pincode level and bring it in the below format:

	postal code	Neighborhood	State	District	latitude	longitude
0	400001	Mumbai G.P.O.,Bazargate,Town Hall (Mumbai),Tajmahal,Stock Exchange,M.P.T.	Maharashtra	Mumbai	18.938536	72.836334
1	400002	Kalbadevi, S. C. Court,Ramwadi,Thakurdwar	Maharashtra	Mumbai	18.948366	72.825935
2	400003	Mandvi (Mumbai),Null Bazar,B.P.Lane,Masjid	Maharashtra	Mumbai	18.950000	72.833300
3	400004	Girgaon,Opera House,Ambewadi (Mumbai),Charni Road,Chaupati,Madhavbaug	Maharashtra	Mumbai	18.950000	72.816700
4	400005	Colaba,Holiday Camp,V.W.T.C.,Colaba Bazar,Asvini	Maharashtra	Mumbai	18.906900	72.810600
5	400006	Malabar Hill	Maharashtra	Mumbai	18.950000	72.783300
6	400007	Tardeo,Grant Road,S V Marg,N.S.Patkar Marg,Bharat Nagar (Mumbai)	Maharashtra	Mumbai	18.966700	72.816700
7	400008	Falkland Road,Mumbai Central,M A Marg,J.J.Hospital,Kamathipura	Maharashtra	Mumbai	18.967140	72.828659
8	400009	Noor Baug,Princess Dock,Chinchbunder	Maharashtra	Mumbai	18.958296	72.838943
9	400010	Mazgaon,Mazgaon Road,V K Bhavan,Mazgaon Dock,Dockyard Road	Maharashtra	Mumbai	18.970188	72.845963

- We will use Foursquare API to explore the venues falling in the 'Nightlife' category around various neighbourhoods in the city.

This data will be exported in a pandas dataframe and will be brought in the below form for further analysis:

	postal code	Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue	id	Venue Latitude	Venue Longitude	Venue Category
0	400001	Mumbai G.P.O.,Bazargate,Town Hall (Mumbai),Tajmahal,Stock Exchange,M.P.T.	18.938536	72.836334	Town House Cafe	5263e1ba11d265711e8024bf	18.938550	72.833464	Bar
1	400001	Mumbai G.P.O.,Bazargate,Town Hall (Mumbai),Tajmahal,Stock Exchange,M.P.T.	18.938536	72.836334	The Clearing House	5810c12738faa0b87f99d404	18.935328	72.838263	Lounge
2	400001	Mumbai G.P.O.,Bazargate,Town Hall (Mumbai),Tajmahal,Stock Exchange,M.P.T.	18.938536	72.836334	5 Spice	4be18fe88815b713ef9e6406	18.933491	72.835955	Chinese Restaurant
3	400001	Mumbai G.P.O.,Bazargate,Town Hall (Mumbai),Tajmahal,Stock Exchange,M.P.T.	18.938536	72.836334	Press Club Mumbai	4dca583cae607b31c0bdf19c	18.940721	72.832469	Bar
4	400001	Mumbai G.P.O.,Bazargate,Town Hall (Mumbai),Tajmahal,Stock Exchange,M.P.T.	18.938536	72.836334	Sunlight Bar	4e19a3221f6eb9559885364c	18.944448	72.829234	Bar
5	400001	Mumbai G.P.O.,Bazargate,Town Hall (Mumbai),Tajmahal,Stock Exchange,M.P.T.	18.938536	72.836334	Bottle bar	517830f4498e1f75ba5bb195	18.930246	72.833423	Lounge
6	400001	Mumbai G.P.O.,Bazargate,Town Hall	18.938536	72.836334	The Bar	567ha37f498e1df6a14d30821	18.930338	72.833421	Cocktail