Final report

Introduction/Business Problem

Today our home, work related issues force us to move to different places as opportunity appears, or to move in a more promising place in hope of opportunity.

The deciding factor for most would be on how lively, supportive, vibrant and unique each of the cities can be when compared to each other. The business problem in this study assumes that people who would be interested in this study are those who would like to create a projection of potential life and activities in these metro city neighborhoods if the subject moves to live in one of them. The decision to choose one over the other would depend on popular venues in the neighborhoods in each of these neighbourhood in this metro city.

The business problem in this study, is to identify the potential of life and business opportunity based on the locality and the activities in this metro city(Delhi).

One can search for a potential home based on his/her preferences about the choices and likes. Or someone can identify and cash on the possible opportunity by either introducing a product/service in these area based on the finding in this study.

Data

We are using the official data provided by the Government of India about the Delhi locality on its postal code for all India. We will remove all other location information and use the data for Delhi only.

Source : We will specifically download the CSV file provided at - https://data.gov.in/resources/all-india-pincode-directory-contact-details-along-latitude-and-longitude (https://data.gov.in/resources/all-india-pincode-directory-contact-details-along-latitude-and-longitude).

Foursquare will help in finding the clusters and popular activities in a given neighbourhood.

Subject can be someone who is in search for a hotspot or locality as per their own preferences and this study can also be used for possible business opportunity.

The dataset may look like -

```
df = pd.read_csv('../Downloads/all_india_PO_list_without_APS_offices_ver2_lat_long.csv', index_col = False)
```

```
df.head()
```

	officename	pincode	officeType	Deliverystatus	divisionname	regionname	circlename	Taluk	Districtname	statename	Telephone	Related Suboffice	Relate Headoffic
0	Achalapur B.O	504273	B.O	Delivery	Adilabad	Hyderabad	Andhra Pradesh	Asifabad	Adilabad	TELANGANA	NaN	Rechini S.O	Mancheri H.
1	Ada B.O	504293	B.O	Delivery	Adilabad	Hyderabad	Andhra Pradesh	Asifabad	Adilabad	TELANGANA	NaN	Asifabad S.O	Mancheri H.
2	Adegaon B.O	504307	B.O	Delivery	Adilabad	Hyderabad	Andhra Pradesh	Boath	Adilabad	TELANGANA	NaN	Echoda S.O	Adilaba H.
3	Adilabad Collectorate S.O	504001	S.O	Non-Delivery	Adilabad	Hyderabad	Andhra Pradesh	Adilabad	Adilabad	TELANGANA	08732-226703	NaN	Adilaba H.
4	Adilabad H.O	504001	H.O	Delivery	Adilabad	Hyderabad	Andhra Pradesh	Adilabad	Adilabad	TELANGANA	08732-226738	NaN	Na

```
df.shape
```

```
(154797, 15)
```

```
df_filtered = df[df.regionname == 'Delhi']
```

```
df_filtered.head()
```

	officename	pincode	officeType	Deliverystatus	divisionname	regionname	circlename	Taluk	Districtname	statename	Telephone	Related Suboffice	Relate Headoffic
32383	Anand Vihar S.O	110092	S.O	Non-Delivery	Delhi East	Delhi	Delhi	NaN	East Delhi	DELHI	011-22157472	NaN	Krishn Nagar H.(
32384	Azad Nagar S.O (East Delhi)	110051	S.O	Non-Delivery	Delhi East	Delhi	Delhi	NaN	East Delhi	DELHI	011-22093521	NaN	Krishn Nagar H.(
32385	Babarpur S.O (North East Delhi)	110032	S.O	Non-Delivery	Delhi East	Delhi	Delhi	NaN	North East Delhi	DELHI	011-22829634	NaN	Jhilmil H.(

The attributes may be many, but need some precise attributes which we extract

```
df.columns
```

```
Index(['officename', 'pincode', 'officeType', 'Deliverystatus', 'divisionname',
       'regionname', 'circlename', 'Taluk', 'Districtname', 'statename',
       'Telephone', 'Related Suboffice', 'Related Headoffice', 'longitude',
       'latitude'],
      dtype='object')
```

```
df_filtered.drop(['officeType', 'Deliverystatus', 'divisionname'
                  , 'circlename', 'Taluk', 'Districtname', 'statename',
                'Telephone', 'Related Suboffice', 'Related Headoffice', 'longitude',
          'latitude'],axis=1, inplace=True)
```

Foursquare API will be used to find the top venues in the neighbourhoods of a given lat. and long. . This will help us understand the nature of life in that particular Delhi neighborhoods have to offer. We will iteratively make Foursquare API calls for each of the Delhi neighborhoods in our dataset.

EX:

Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
505 A B Workshop, A F Palam, Aps Colony, Bazar...	Arts & Crafts Store	Water Park	Shopping Mall	Pizza Place	Museum
A F Rajokari, Rajokari	Arts & Crafts Store	Water Park	Shopping Mall	Pizza Place	Museum
A.G.C.R., Ajmeri Gate Extn., Darya Ganj, Gandh...	Arts & Crafts Store	Water Park	Shopping Mall	Pizza Place	Museum
A.K.Market, Multani Dhanda, Pahar Ganj, Swami ...	Arts & Crafts Store	Water Park	Shopping Mall	Pizza Place	Museum

In [ ]: