TO OPEN A DESSERT PLACE
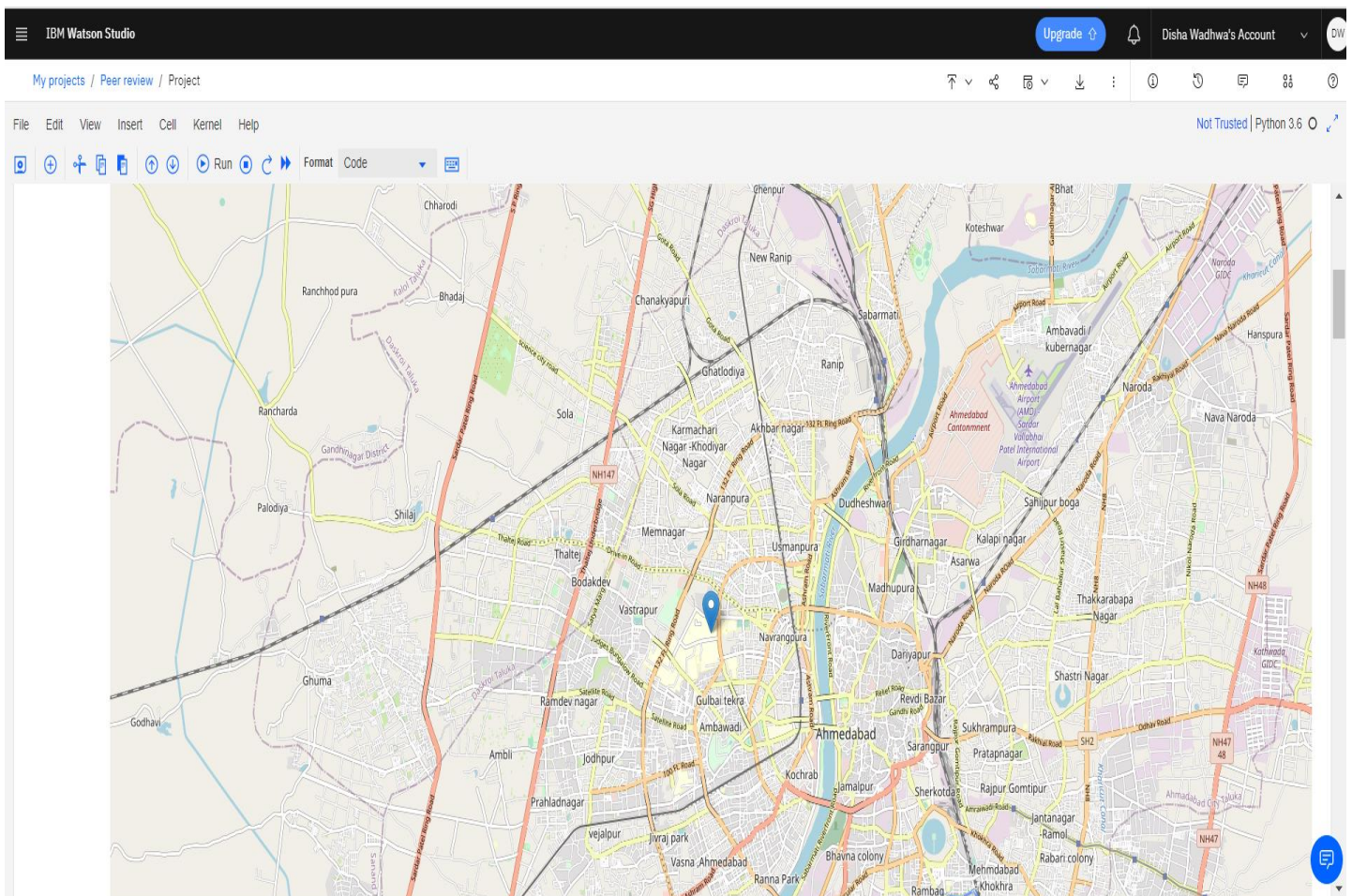
- ## Business problem

There are a lot of restaurants of various cuisines in this place. However it is observed that there is a lack of bakeries. Therefore it is proposed to open a bakery called Delicious here. However this should be in a location where there are more young people and less number of other restaurants and bakeries.

- ## Source and usage of data

To get the information various details like name of restaurant, pricing, rating is used. Also the two main API,s used are

-Zomato API

- Foursquare API

This will help us gather all information which also includes latitude and longitude.

- **Data Cleaning**

As we can see there is data asymmetry so the first task to be performed was data cleaning. This was done by matching places with the help of their longitude and latitude. This was done with the help of rounding up. After this all the outliers that were included in our dataset like parks, swimming pool, clothing stores were removed from our consideration set.

Figure 1: Venues retrieved from Foursquare API

Figure 2: Venues retrieved from Zomato API

- **Data Model development and Methodology**

In order to understand our competition we used rating and pricing of other restaurants. Places with 5km radius were chosen around the famous location and University. Zomato API was used to get the venue rating and the other API was used to get latitude and longitude.

Then data from both the sources was combined to get a structured table. Venues were also clustered with whatever information was available and folium maps too were used in this procedure. Thereby it allowed us to gather more information for places to be recommended as it was backed up by data.

- **Identifying Places**

Another classification in data done was that the data was classified by various categories like South Indian, BBQ, Drinks, Cupcake stores, Tea stores etc. This helped to understand the level of competition. Here rating was also also used.


Count of places with given rating
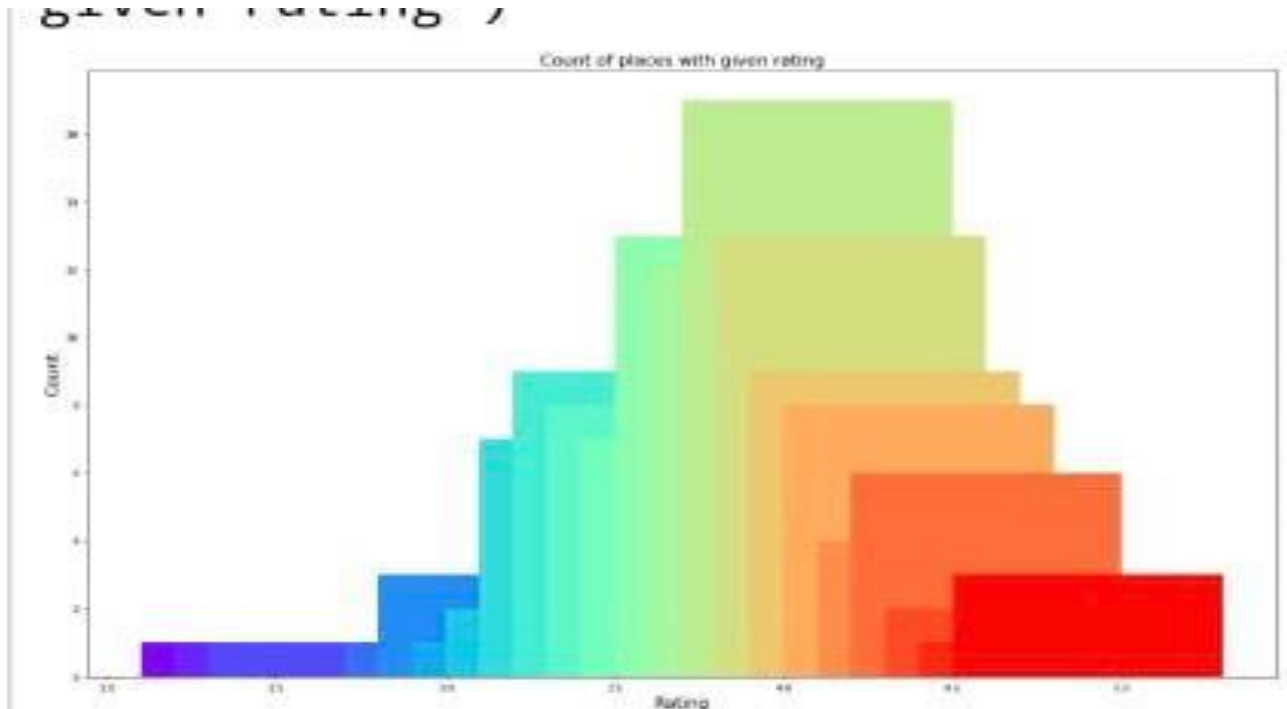
`foursquare_venues`

Out[6]:

name	categories	lat	lng
Zencafe	Café	23.036322	72.54
Upper Crust	Diner	23.041185	72.54
K K tea stall	Tea Room	23.030198	72.54
7 Violettes	Bakery	23.040112	72.54
Cinepolis	Multiplex	23.039896	72.53
Ahmedabad One	Shopping Mall	23.039758	72.53
TOMATO'S	Mexican Restaurant	23.026693	72.55
Mocha	Café	23.029512	72.55
Amdavad ni Gufa	Art Gallery	23.036299	72.54
All The Perks	Café	23.040796	72.54

• Studying the pricing per person of various places

In order to understand the pricing strategy of various places around us a pricing chart was also constructed. This told us that all [laces had a pricing of below Rs 1000.


Count of venues with given average price
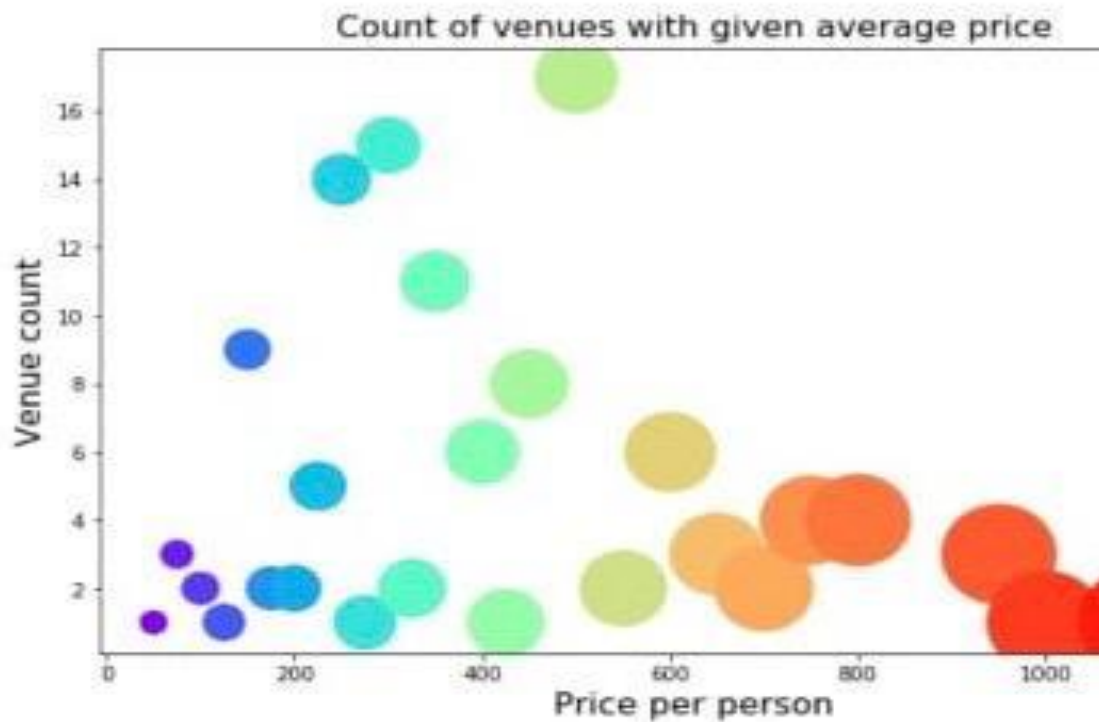
ython kernel.
Out[21]:

	rating	address	rating_bin	average_price
	4.2	Kasturbhai Lalbhai Campus, University Area, Na...	Very good	400.0
	4.3	Aarohi Complex, Vijay Cross Road, Navrangpura,...	Very good	500.0
	4.3	A 2, Vishal Apartments, Off University Road, ...	Very good	250.0
	4.6	10, Vasant Baug Society, Near IDBI Bank, CA Ci...	Very good	600.0
	4.3	A-1, Ground Floor, Maharaja Palace, University...	Very good	500.0

• Use of K means

Finally K means was used to cluster the venues into different groups. The blue cluster has a low average rating and price range than the green cluster.
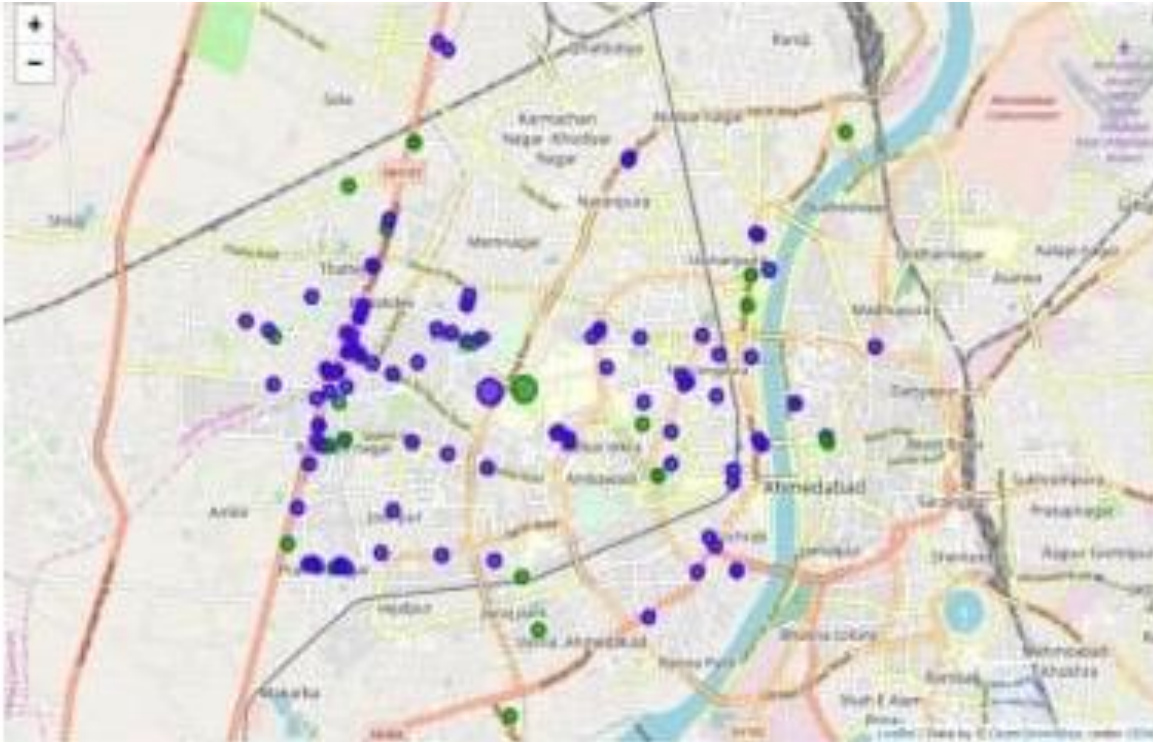
• Result and conclusion

All the classification and clustering has revealed that we can locate our dessert place in this area but however keeping in view the competitors pricing we should ensure that the pricing should be around Rs.600 per person.