COURSERA CAPSTONE

IBM Applied Data Science Capstone

BANGALORE-EAT TREAT

By: Naveen Karanth A

May 2020

BUSINESS PROBLEM

- The city of Bangalore, India is known as the Garden city, but it is packed with restaurants, night life and amazing people. For people that are new to Bangalore, it can be daunting to figure out what restaurants are worth going to and where they are.
- For this project, I am going to put on my entrepreneur hat and create a simple guide on where to eat based on Foursquare likes, category and geographic location data for restaurants in Bangalore.
- Business Objective:

  Cluster the restaurants based on their similarities so that a user can easily determine what type cuisine they are looking for.

DATA

- **Data Requirements**

  For this project, I will be utilizing the Foursquare API to pull the following location data on restaurants in Bangalore:

  - Venue Name
  - Venue ID
  - Venue Location
  - Venue Category
  - Count of Likes

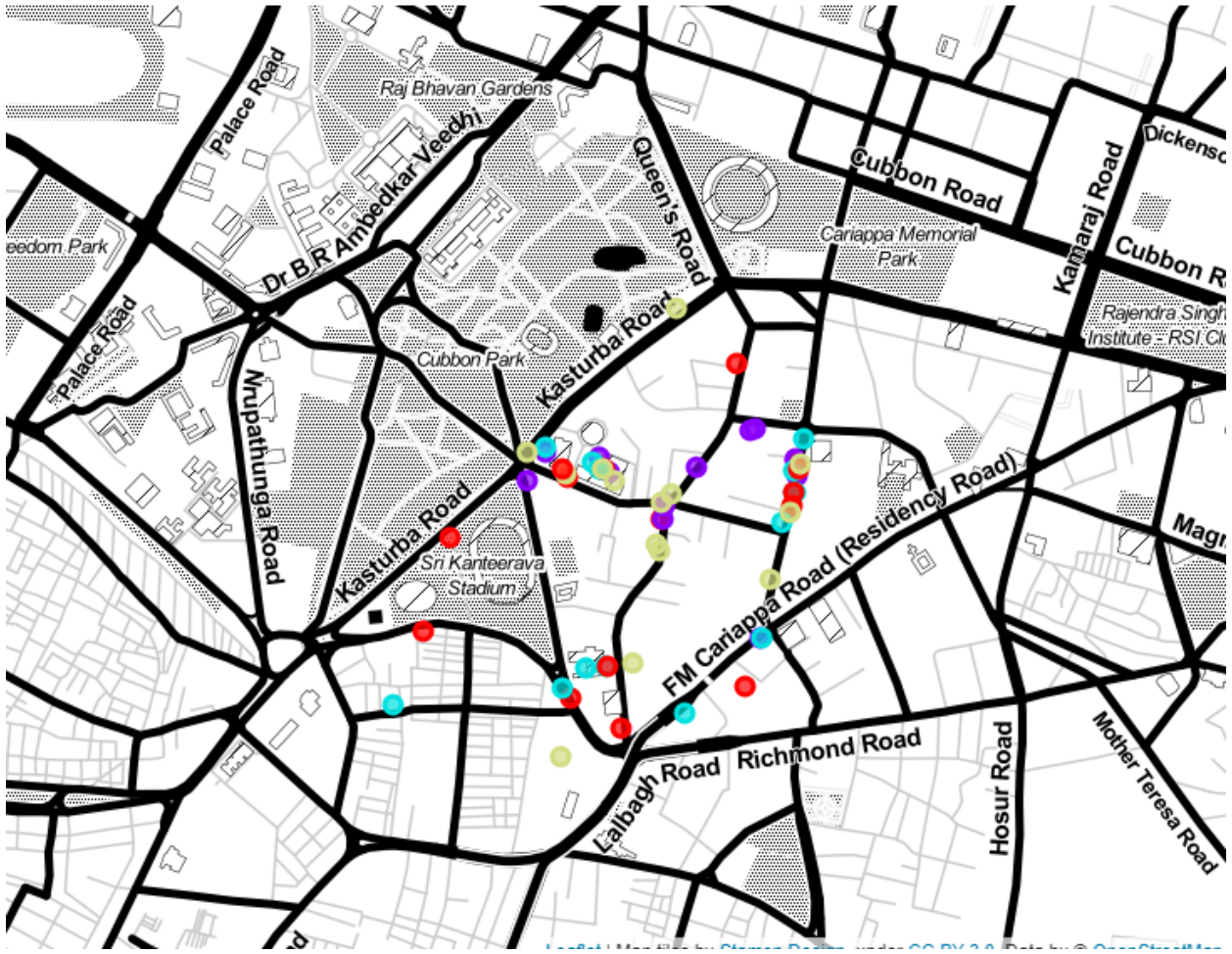
- **Data Acquisition Approach**

  To acquire the data mentioned above, I will need to do the following:

  - Get geolocator latitude and longitude coordinates for Bangalore.
  - Use Foursquare API to get a list of all venues in Bangalore
    - Get venue name, venue ID, location, category, and likes

METHODOLOGY

- **Process**
  - The thought process behind this is that likes are a proxy for quality. The more likes there are, the better the restaurant is. This might be incorrect in some cases with API call issues (how many I can use for free) holding me back from getting price / rating data.
  - Create new categorical variables for the restaurants to better group them based on type of cuisine. This way you can look for good Mexican food or now what type of food might be best to eat in Bangalore if you are new to the area.
  - Take the gathered data to perform a k-means clustering that groups restaurants into 4-5 clusters so that people looking to eat in Bangalore can easily see which restaurants are the best to eat at, what cuisine is available and where in Bangalore they can look to eat.
- **Mechanism**
  - For this case, we will use the one hot encoding to code for the cuisine and the total likes for each restaurant. Then we use the K-Means clustering to group the restaurants into different clusters based on the likes.
  - We use then look at each cluster to deduce the conclusions.



RESULTS

- 4 clusters are formed
  - Cluster 1 is for Poor quality food.
  - Cluster 2 represents Above average quality food.
  - Cluster 3 portrays High quality food
  - Cluster 4 denotes Below average quality food

DISCUSSION

- Mexican cuisine based restaurants and Café's are the least favourite with poor likes.
- Local Indian cuisine forms the below average quality.(may be due to lack of reviewers)
- Bars, Italian and Indian restaurants are seen to be serving above the average quality of food.
- Asian cuisine and Indian Breakfast spots are the top quality food restaurants with maximum people liking the food that is being served there

CONCLUSION

- With Indian breakfast spots claiming the top quality, it is highly recommended to try this for some lip smacking delicacies.
- Bars and Italian are the next best options with good quality food and mostly a great ambience.
- Some Indian restaurants with less likes can also be tried and reviewed so that it gets benefitted for both the data scientists and also the foodies.

THANK YOU

thank you
danke
謝謝
рахмат
ngiyabonga
teşekkür ederim
gracias
merci
obrigado
bedankt
спасибо
Баярлалаа
dziękuję
sukriya
kop khun krap
go raibh maith agat
mochchakkeram
tapadh leat
dank je
terima kasih
감사합니다
ありがとう
arigatô
dakujem
мерси
grazie
takk
taiku
ευχαριστώ
hvala
maururu
köszönöm
faafetai lava
vinaka
blagodaram
спасибі
mersi
barka
welalin
tack
misaotra
matondo
paldies
grazzi
mahalo
хвала
asante
manana
obrigada
murakoze
tenki
djiere dieuf
tau
дякую
mamnun
chokrane
trugarez
shukriya
merce
dhanyavadagalu
diolch
rahmet
tanemirt
xiexie
sulpáy
grácies
gratias ago
chnorakaloutioun
akun
dankon
aciú
sagolun
najis tuke
kam sah hamnida
didi madloba
mesi
rahmat
dêkuji
sobodi
enkosi
bayarlalaa
gracie
nanni
nandri
kiitos
dankie
dhanyavad