PREDICTING LOCATION FOR OPENING NEW HOTEL

IBM APPLIED DATA SCIENCE CAPSTONE PROJECT

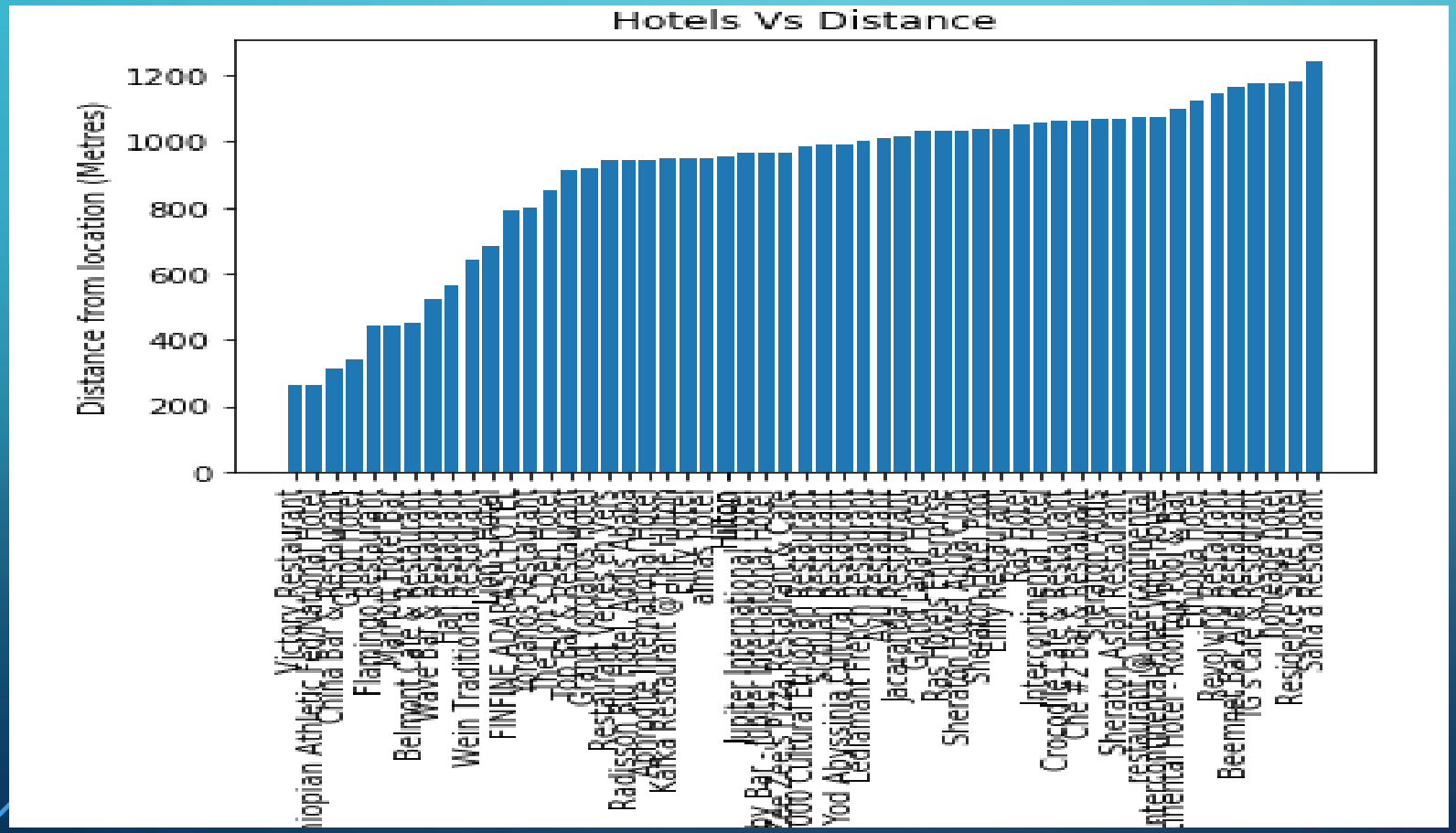
BEGINNING OF NEW HOTEL ADDIS ABABA

- Coming down to business problem , I would like to open a hotel /restaurant
- As it is a famous tourist spot , there is already lots of attention towards it . I know their will be many competitors in terms of hotel and restaurant
- i want to bring foreign and local peoples attention towards my new hotel
- The challenge is to find a suitable location for opening a new hotel/restaurant attracted to all local and foreign people in the center of all famous venues

DATA SOURCE AND HOW WILL IT BE USED?

- We will be completely working on Foursquare data to explore and ty to locate our new hotel where more venues like church temples museums memorial that are present nearby
- We will looking for midpoint of venues to locate our new hotel. Before that our major focus will be an all venues present in and around the care place of Addis Ababa
- Our care location of Addis Ababa I spotted at 9.0107934 ,38.7612525

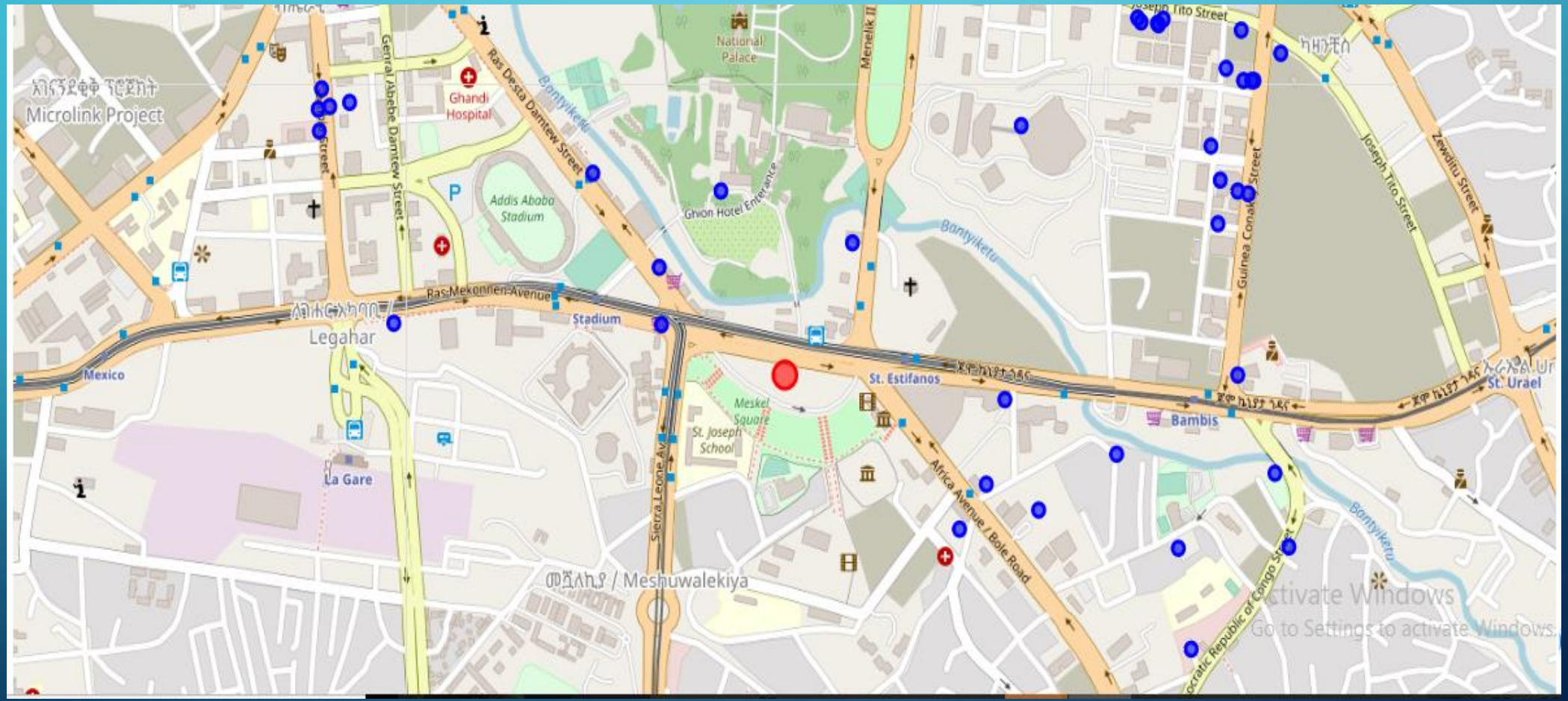
HOTELS


Hotels Vs Distance
Distance from location (Metres)
0
200
400
600
800
1000
1200

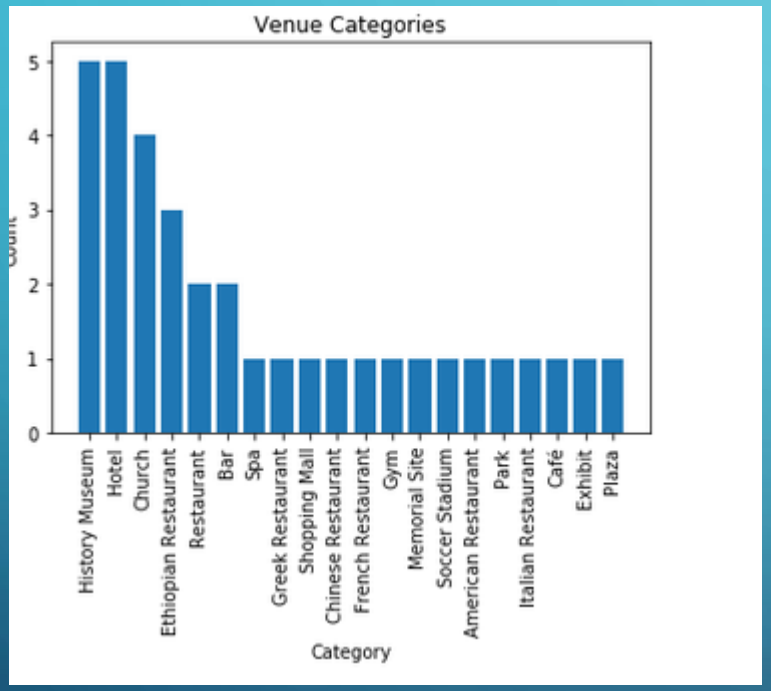
HOTELS/RESTAURANTS DATA

- There are 54 hotels /restaurants within 1 km radius captured through foursquare data
- Vectory Restaurant/hotel is closest of all other hotel
- Sana Restaurant is far than rest of hotels /Restaurant
- 902 meters is average distance from all hotels/resturants

MAP HOTELS/RESTAURANTS

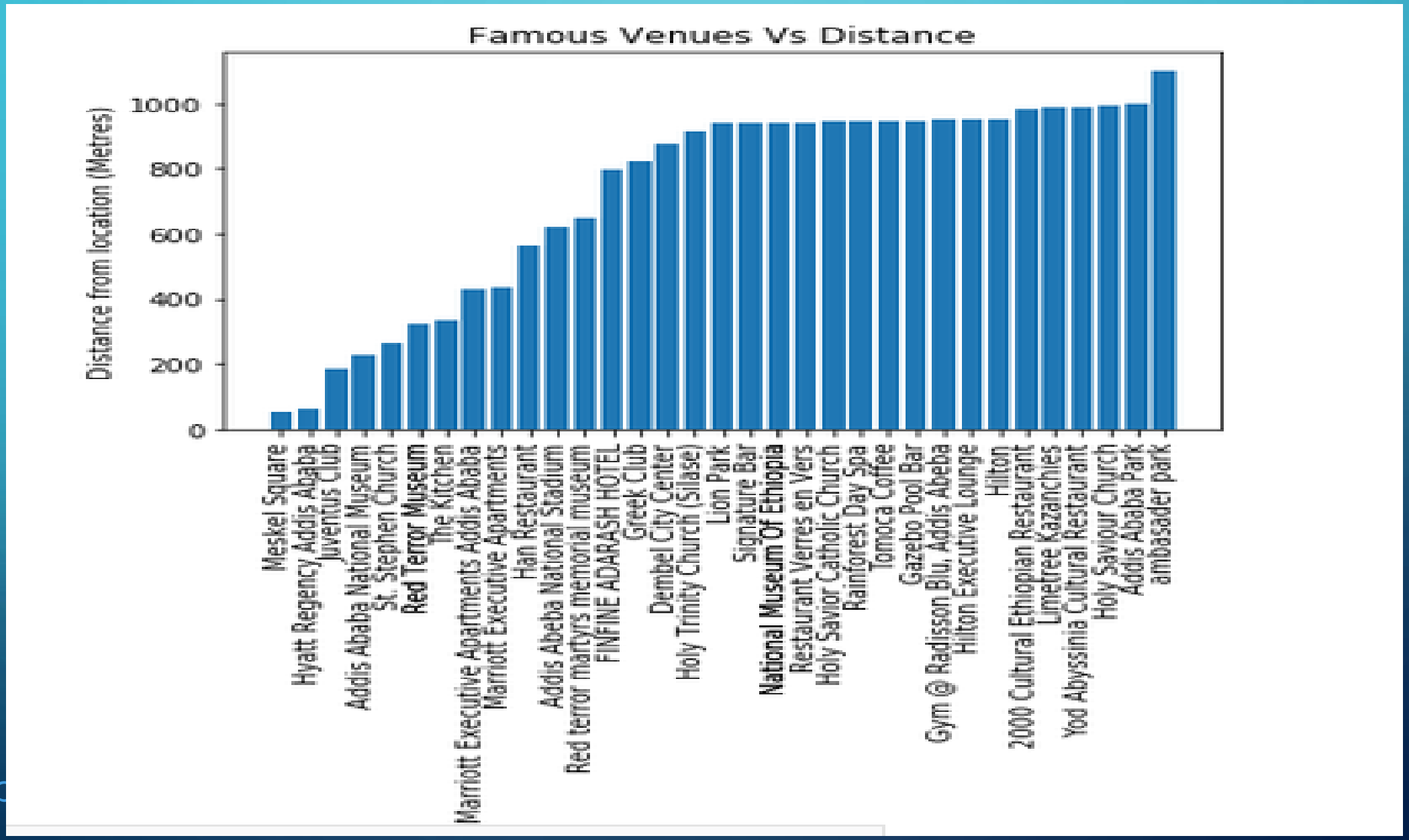


VENUES CATEGORIES



- Even though we didn't have immense data to consider distribution of categories we could see that Hotel, History Museum, Church and Restaurant are more common venues.

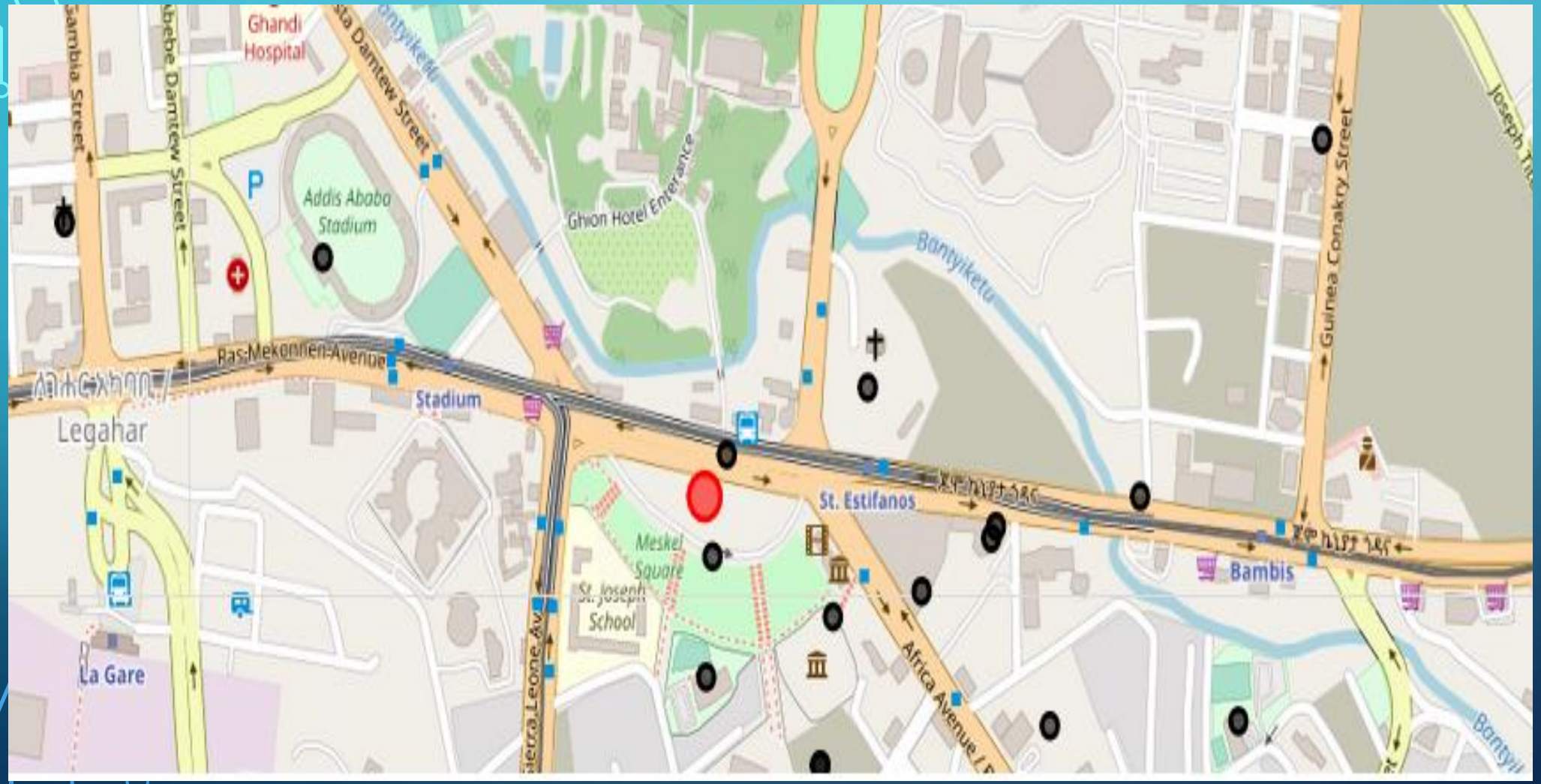
CLUSTERING AND MIDPOINT



VANUES

- There are 32 vanues within 1km radious captured through foursquare data
- Meskel square Hyatt regency addis ababa ,Juventus club Addis ababa national museum are more closer to our location
- Ambasader park is far than the rest of places

VANUES MAP


Ghandi Hospital
Addis Ababa Stadium
Ghion Hotel Entrance
Bantyiketu
Ras-Mekonnen-Avenue
Stadium
Legahar
St. Estifanos
Meskel Square
St. Joseph School
Bambis
Guinea Conakry Street
La Gare
Africa Avenue

CLUSTERING AND MIDPOINT OF VENUES

- The ideology behind this could be to produce the center of location all famous top rated/tips venues
- First we will find the clusters and based on it we will take the average all centroids
- Secondaly, we will get midpoint of all shortlisted rated venues
- Now we will get mean of both and decide our final location
- We looked for three clusters and they were sorted out as shown in map (next slide)

CLUSTERED MAP

MY PREDICTED LOCATION

- Final location is pointed at 9.0133219 ,38.76424166
- This location is at united nation conventional center
- At the side of Main road to government palace

Discussion section

- From above reports, we could get an idea why the predicted one is pointed/clustered on the given spot. First most thing could be the center of attraction for the place.
- KMeans have figured out the most common place for all the venues. This output was very adjacent to the core location. This proves the accurate spotting of our predicted algorithm.
- Despite of the findings, there were some lack in data. Tips and ratings were missing all of the venues.
- I enjoyed learning this course.

THANK YOU