

# IBM Data Science Capstone Project

Battle of the Neighborhoods  
Gurgaon, India

## **Introduction:**

Imagine you have been living in South India all your life and you have only been eating South Indian food almost all the time. Now due to official reasons, you end having to move to the north and to city called Gurgaon and you want to know where or which place you can settle in based on the food you want to eat or the food you are accustomed to.

This problem statement given above is what we will try to derive and get results for the ourselves, so we can find the best neighborhood to stay in and eat the food that satisfies us and makes us feel more at home.

## **Data Section:**

In this project we will use the Zomato dataset which is available on Kaggle to get all the restaurants present in the area and using the Foursquare API we will get all the nearby localities to each restaurant, let's hope that we find the best place to stay and set up a South Indian restaurant in this growing city.

## **Methodology:**

*The target or the final result of this project is to answer these questions and get the best location for a South Indian to stay:*

- Which is the best location in Gurgaon city to have South Indian food.
- Which areas have the best South Indian restaurant Market.
- Which areas have a smaller number of restaurants.
- Which is the best place to stay if I prefer South Indian cuisine.
- What places have the best restaurants in Gurgaon?

*And to do this we first:*

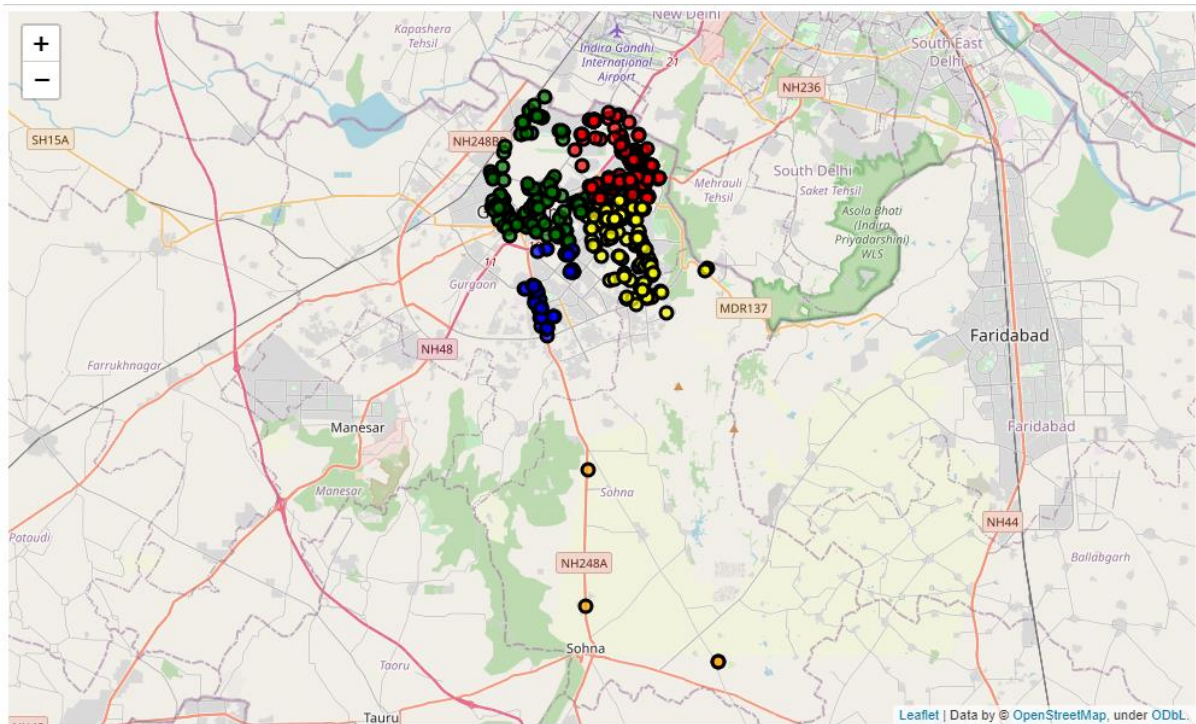
- Collect the data from Zomato Kaggle Dataset.
- Using the foursquare API, we will find the all the venues for each neighborhood
- Filter out all the venues which are nearby each locality.
- We will use the aggregative rating for each restaurant to find the best places.
- Finally, we will visualize the Ranking of the Neighborhoods using the Folium Library.

*Using matplotlib we first created bar charts for the following questions:*

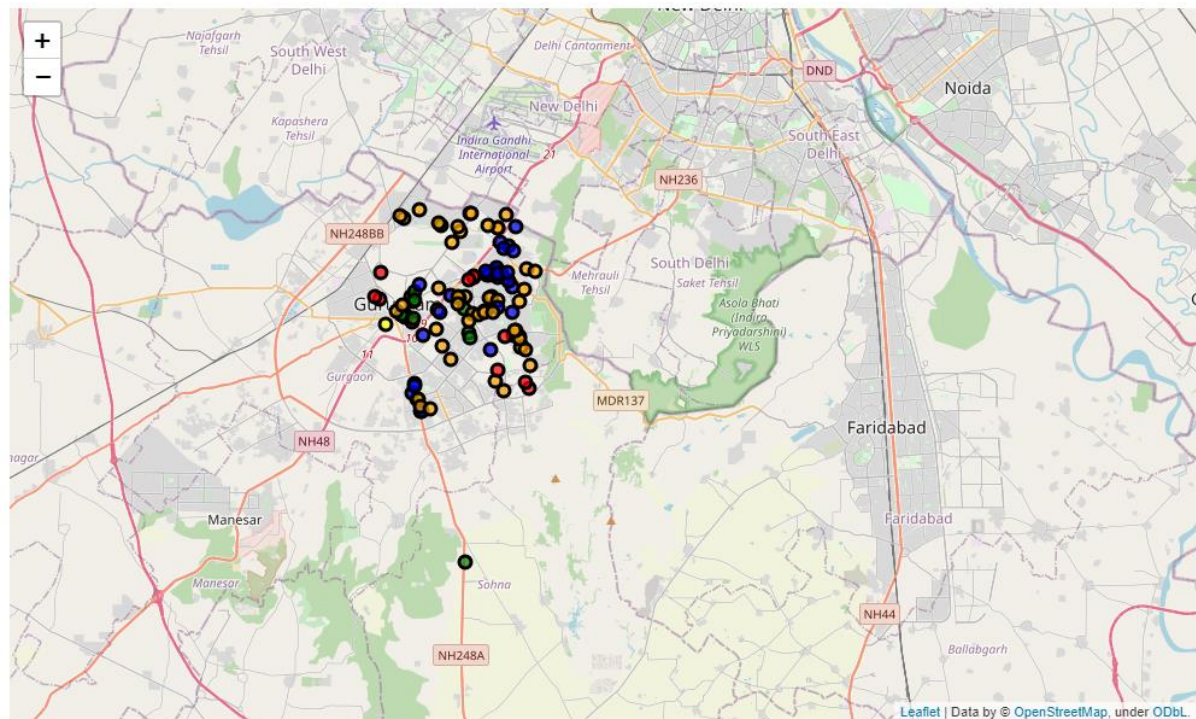
- Which places have the best restaurants in Gurgaon?
- Which places have the worst restaurants in Gurgaon?
- Which is the best locality for a foodie to stay?
- Which is not the best locality for a foodie to stay?
- Which locality is the best area to set up a South Indian Restaurant?
- Which places have the best South Indian Restaurants?

And then after visualizing the data using bar charts for the previous questions, we then used k-means clustering algorithm to find out which locality is the best to stay in based on the Data we gathered and which is the best place to stay based on the amount of South Indian restaurants in the area.

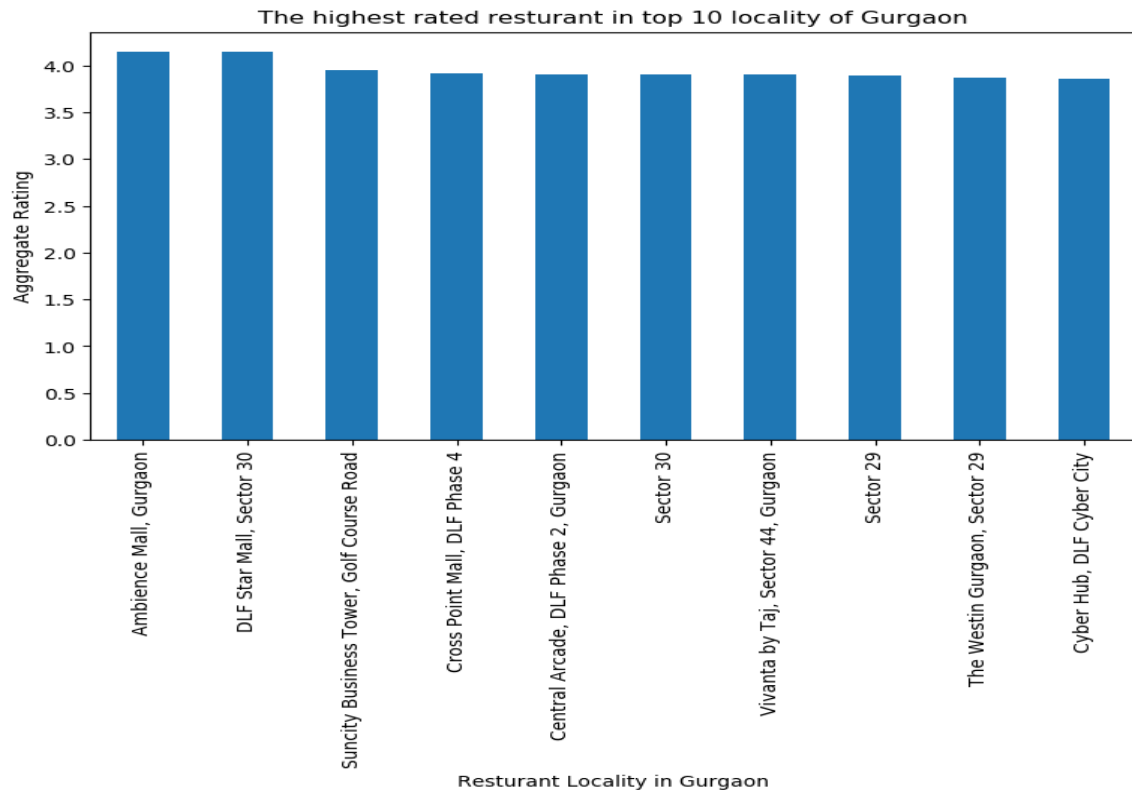
## Results:



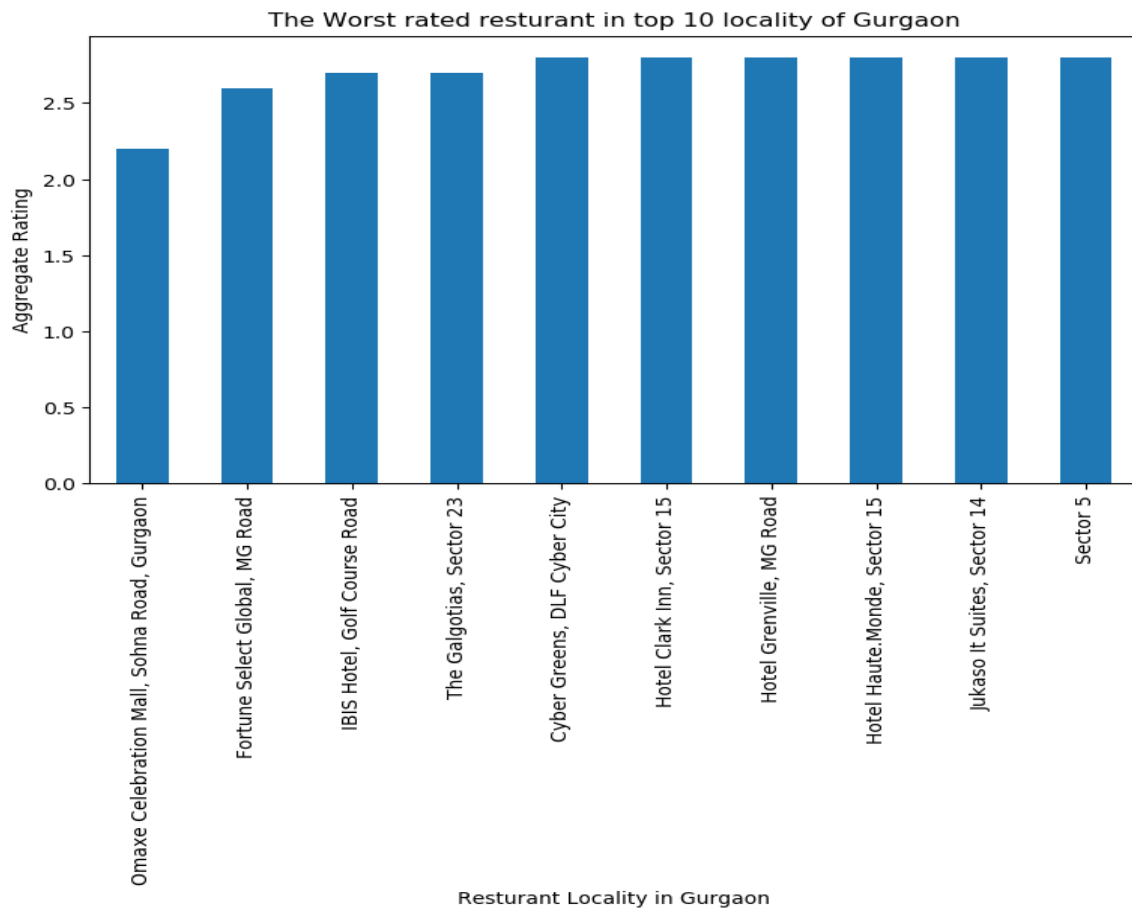
Map of Gurgaon where all the restaurants are marked.



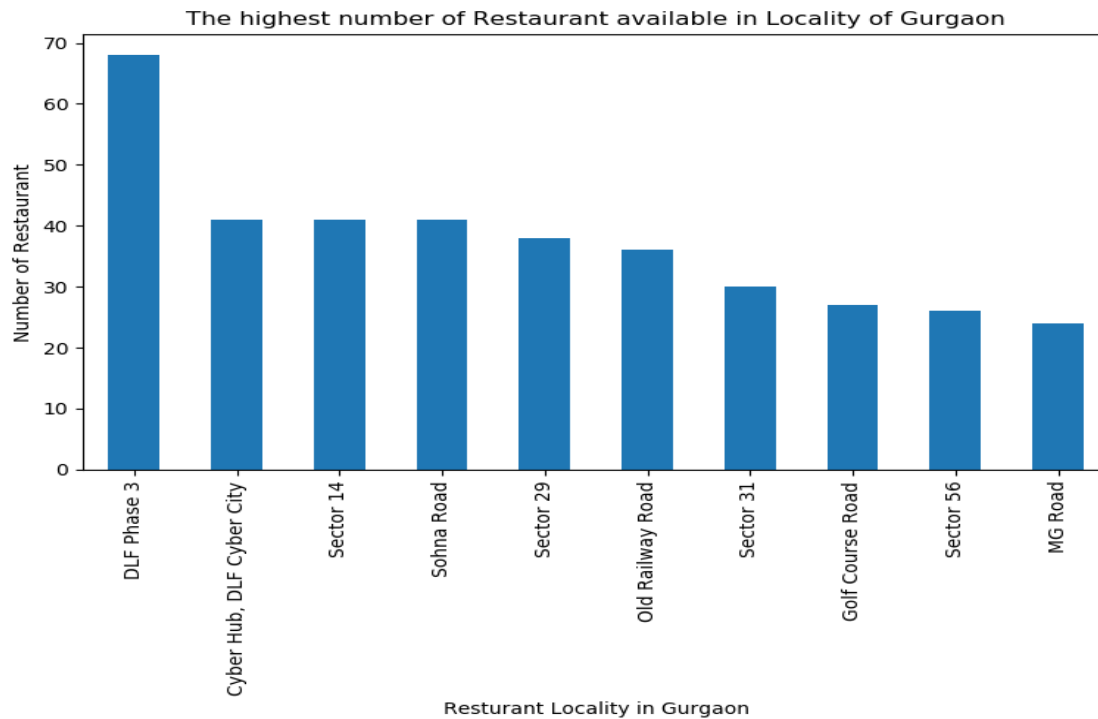
Map of Gurgaon where we deduced the clusters and found the best place for a South Indian to stay based on the restaurants which are marked by the orange clusters



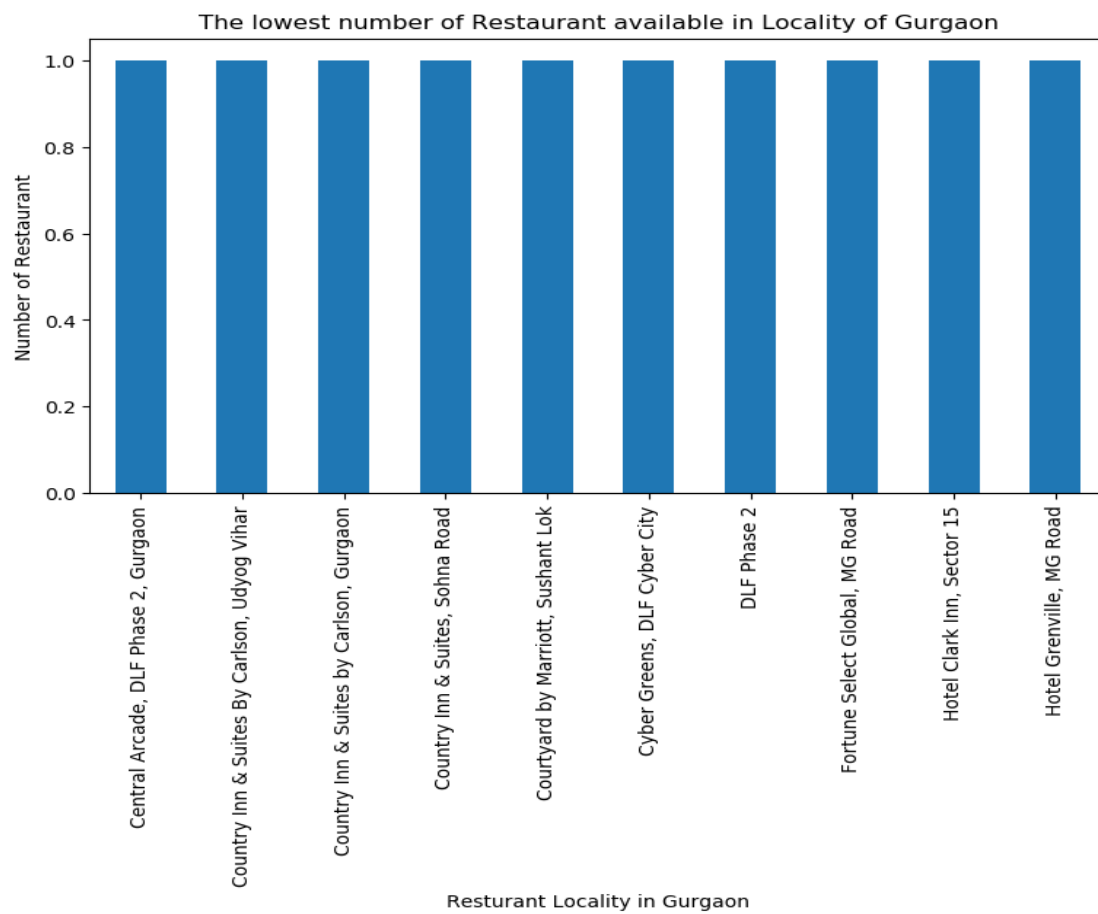
**Ambience Mall** has the best rated restaurants in the city



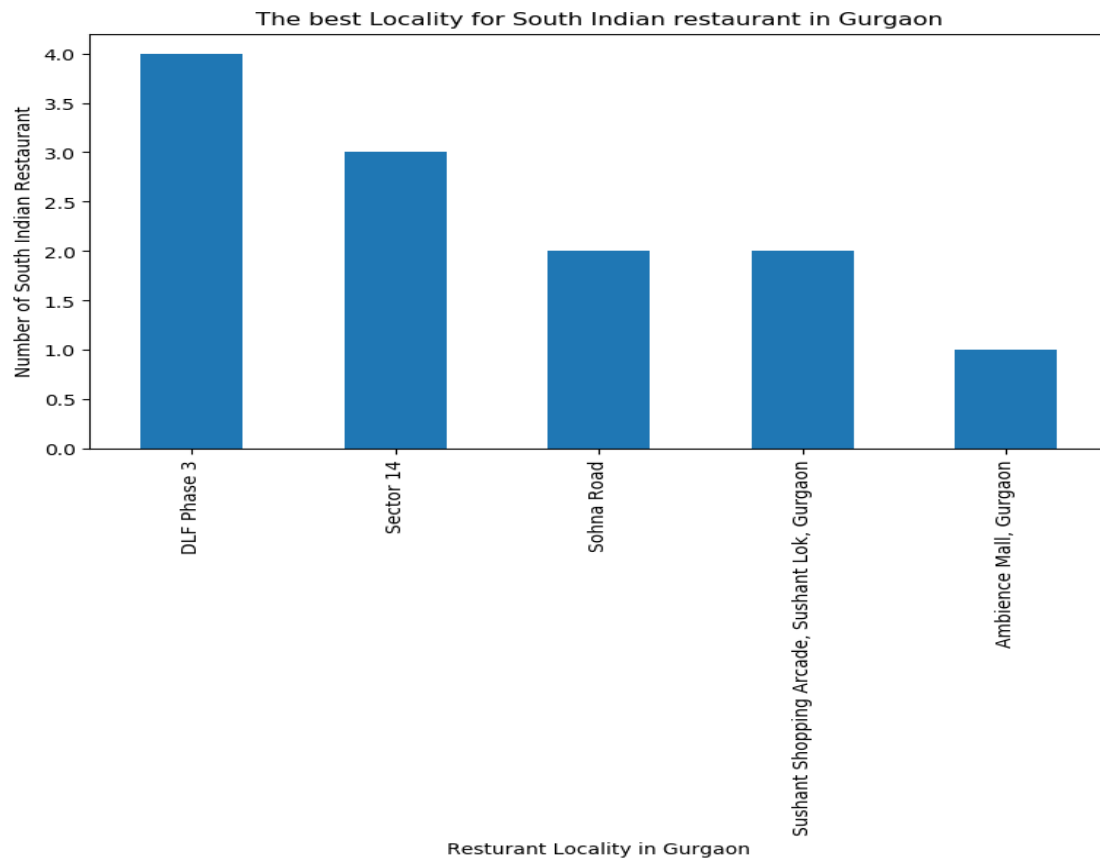
**Omaxe Celebration Mall** has the worst restaurants in the city



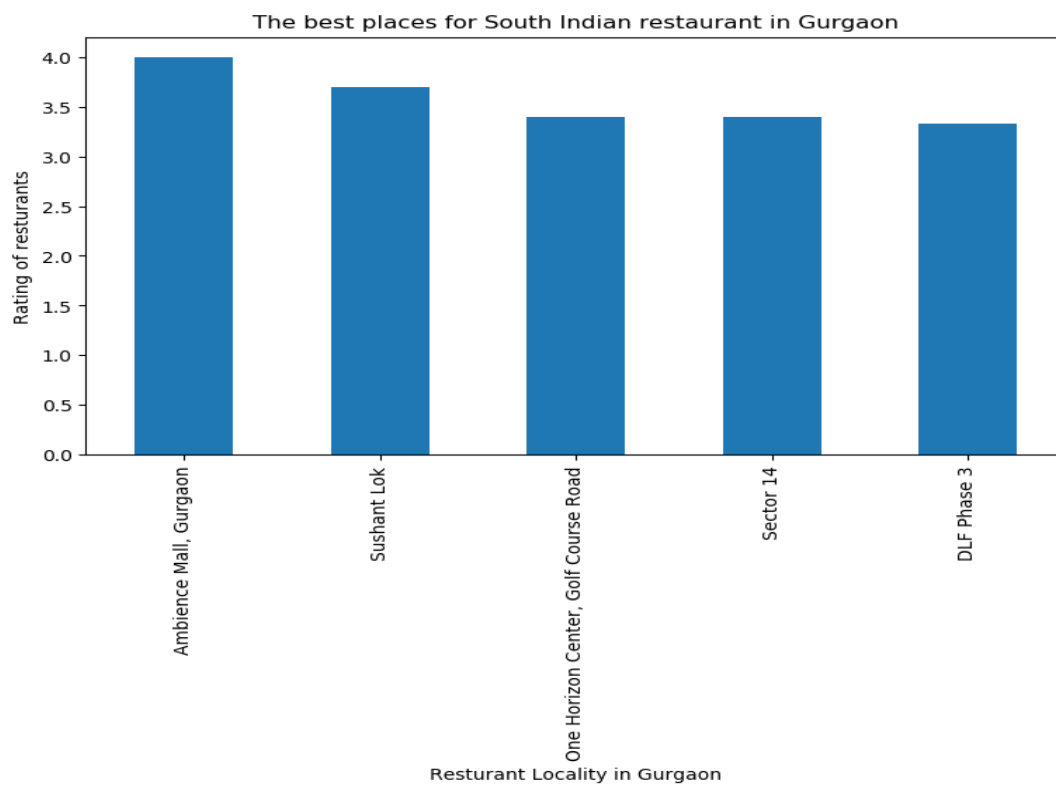
**DLF Phase 3** is the best place for a foodie to stay as there are quite a number of restaurants in that locality



**Central Arcade, DLF Phase 2** is not the best place for a food to stay as there aren't that many restaurants in the locality.



**DLF Phase 3** is the best place for a South Indian Restaurant



**Ambience Mall** has the best South Indian Restaurants

From the given bar charts, we managed to answer all the questions we needed and we also found out that the best places to stay for a South Indian person working in Gurgaon was **DLF Phase 3** and **Sector 14**.

## **Discussion:**

Since Gurgaon is a city that is close to New Delhi, most of the people who work in Gurgaon stay in the outskirts of Delhi as there is a Highway that leads them straight into Gurgaon, hence the localities and the restaurants are not as much as there in New Delhi.

Regardless of that, the amount of companies and organizations that have setup base there are causing real estate firms to build more housing there as it keeps developing year after year and anyone who works there, whether they were born there or coming from any part of the India or the world can use these findings to find the best restaurant or best locality they wants to stay in.

## **Conclusion:**

Now we know which place a South Indian person can look forward to stay in Gurgaon and also eat the food he wants eat everyday and even if he wants to switch up the cuisine once in while he can do that as well as in DLF Phase 3 there are many more restaurants with different cuisines in which he can choose from.