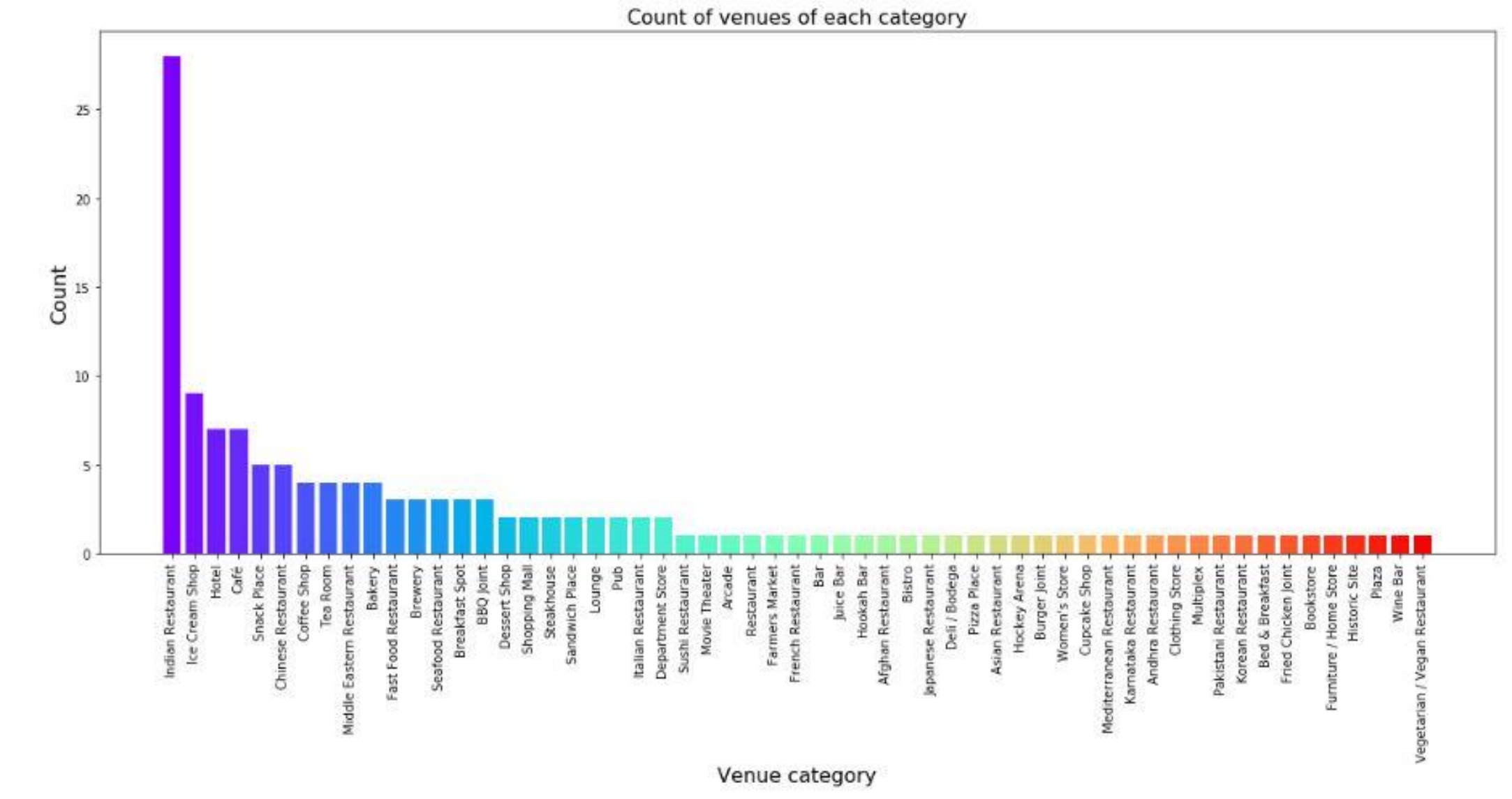
EXPLORING VENUES IN BENGALURU, INDIA USING FOURSQUARE API AND ZOMATO API

EXPLORING A NEW CITY

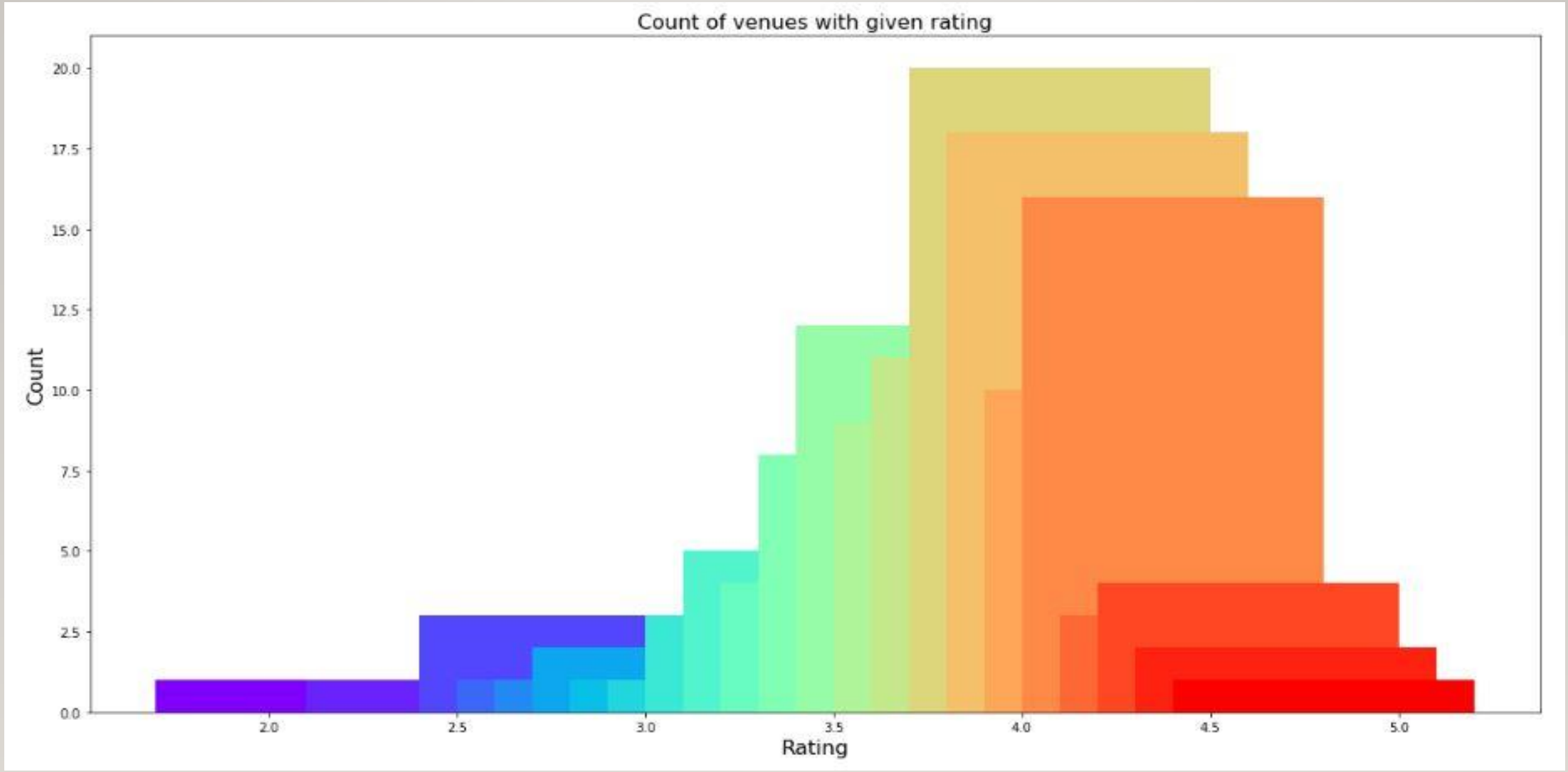
- Whenever a person explores a new city, they would be highly interested in the best the city has to offer.
  - They might want to know how good a venue is, the price range it falls under and where it is located.
  - This information will help them choose a restaurant of their liking among many other places in the city.
  - Combining the location, rating and price information would help anyone in the city make better decision about the place they choose.
- Bengaluru (also called Bangalore) is the capital of India's southern Karnataka state.
  - The center of India's high-tech industry, the city is also known for its parks and nightlife. There are a lot of places to can be explored.
  - In this project we try to explore different venues in Bengaluru and attributes the data based on average price and user ratings.
- Any person vising the city would be interested to have the details and plots of the local landscape and choose a place that suits them.

DATA ACQUISITION AND CLEANING

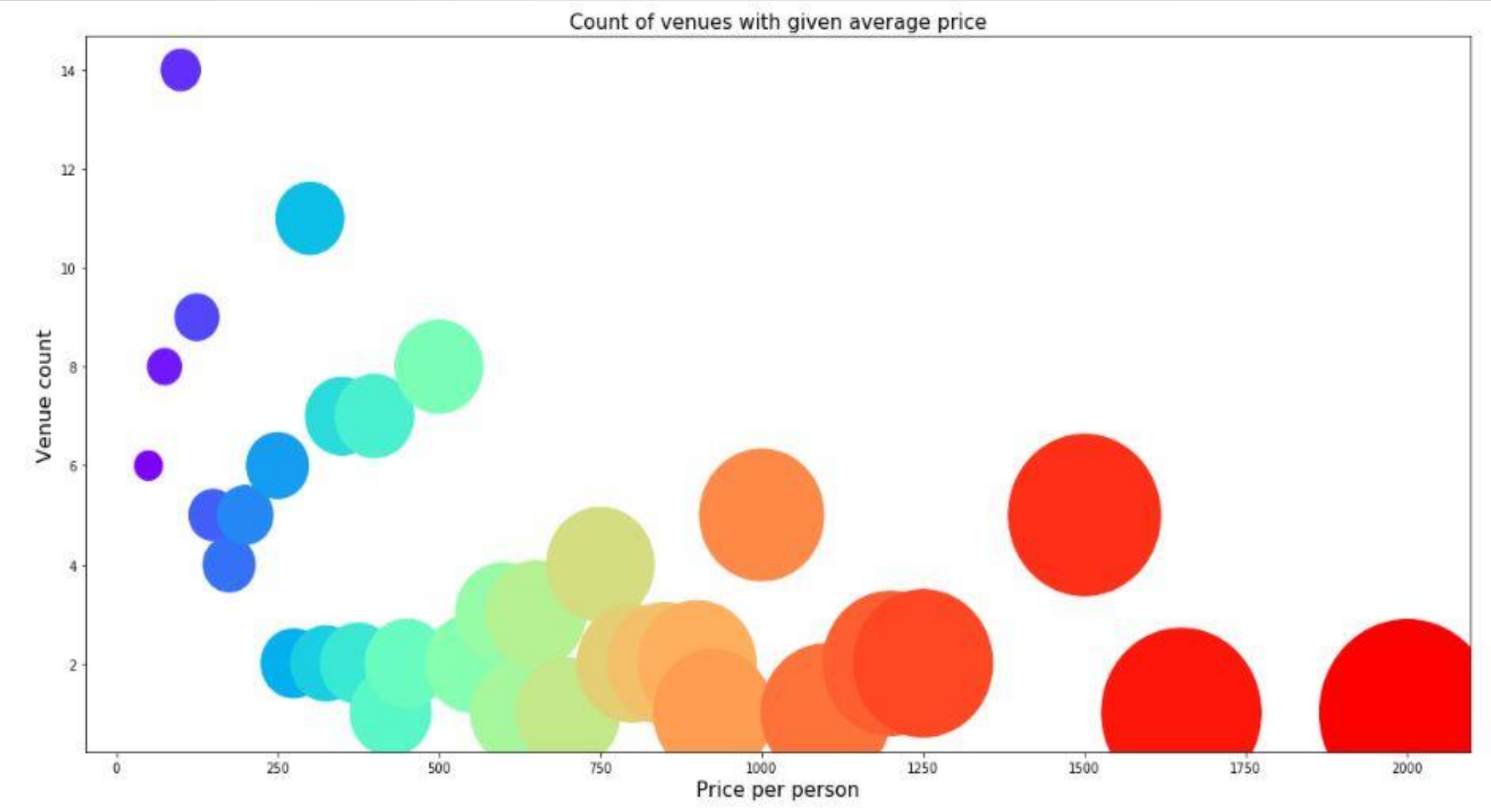
- Using Foursquare API (https://developer.foursquare.com/) obtained venues in a 4km range from the center of Bengaluru and got their names, which category they fall under and their locations (latitude and longitude).
- Used Zomato API (https://developers.zomato.com/api) to fetch details like 'Name', 'Address', 'Ratings', 'Price Range', 'Latitude', 'Longitude' for the respective venues.
- dropped the all the corresponding venues that have latitude and longitude differences more than 0.0004 from both the API's.
- After Average price per person was calculated and venues with 0 rating were dropped we are left with 139 venues and 8 features



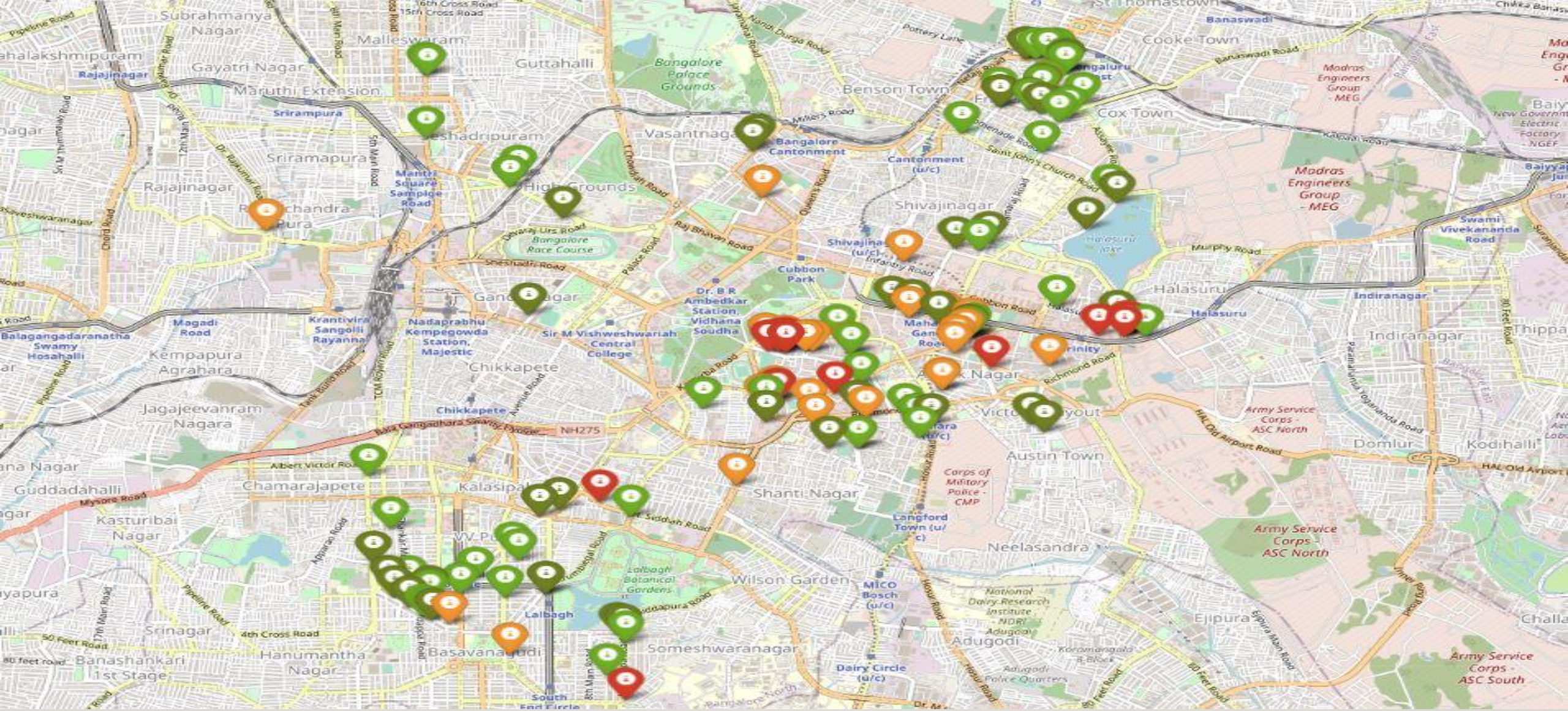
Plot showing different types of venues and number of venues in Bengaluru city within a 4km radius from the center.



Plot showing rating and number of venues with that rating.

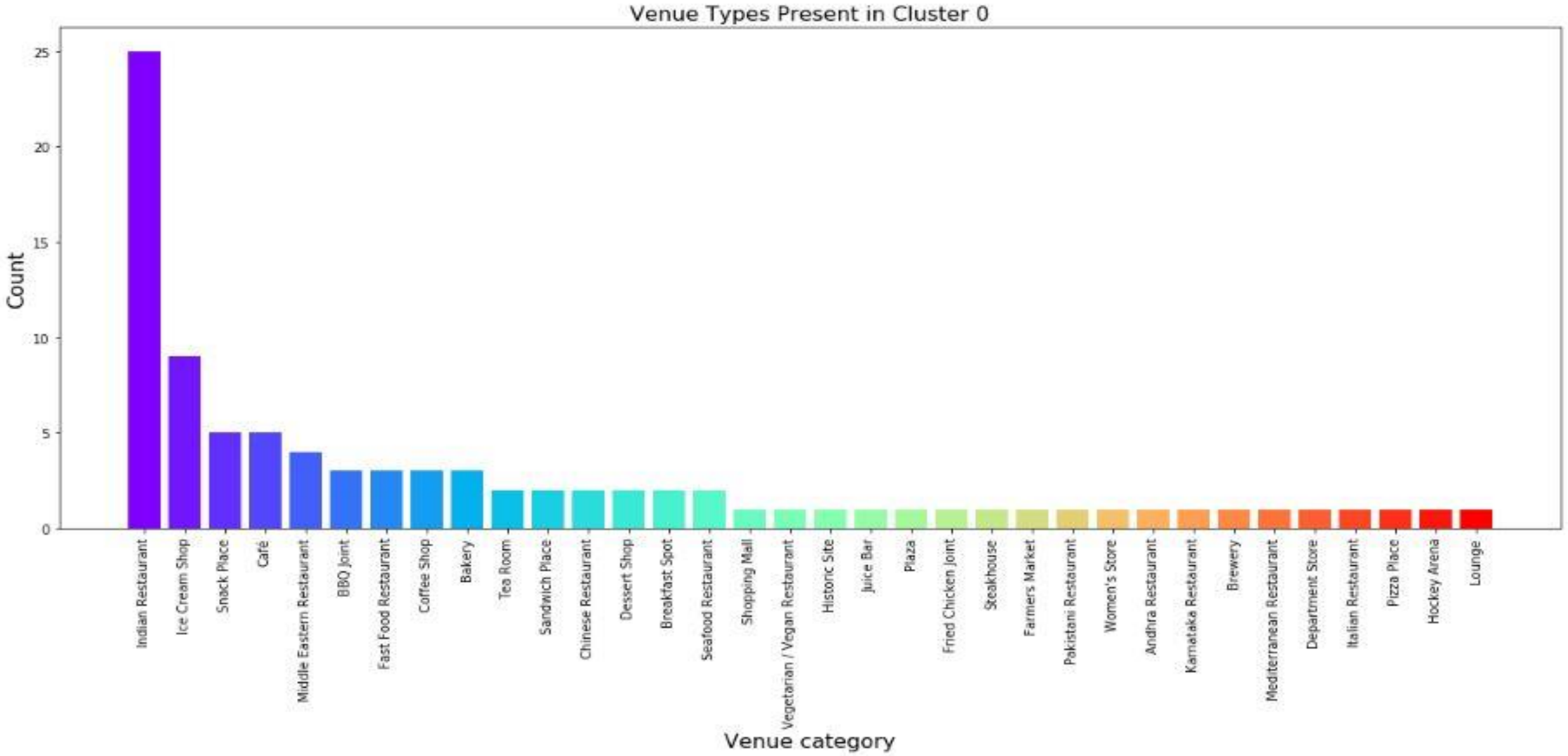


Plot showing average price per person and number of venues with that price.

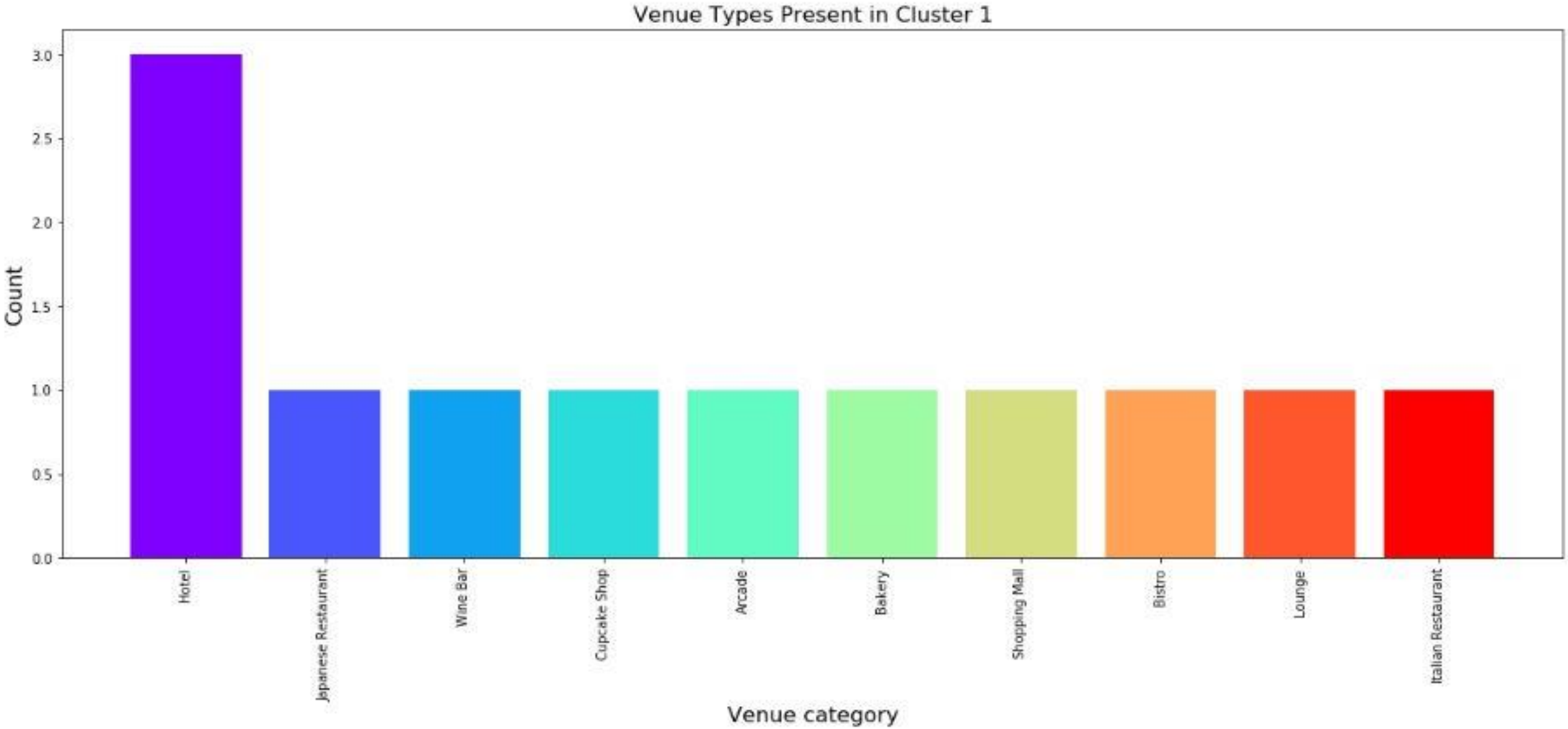


Map showing venues with average price per person color coded red being the highest and green being lowest, within 4km radius from center of Bengaluru.

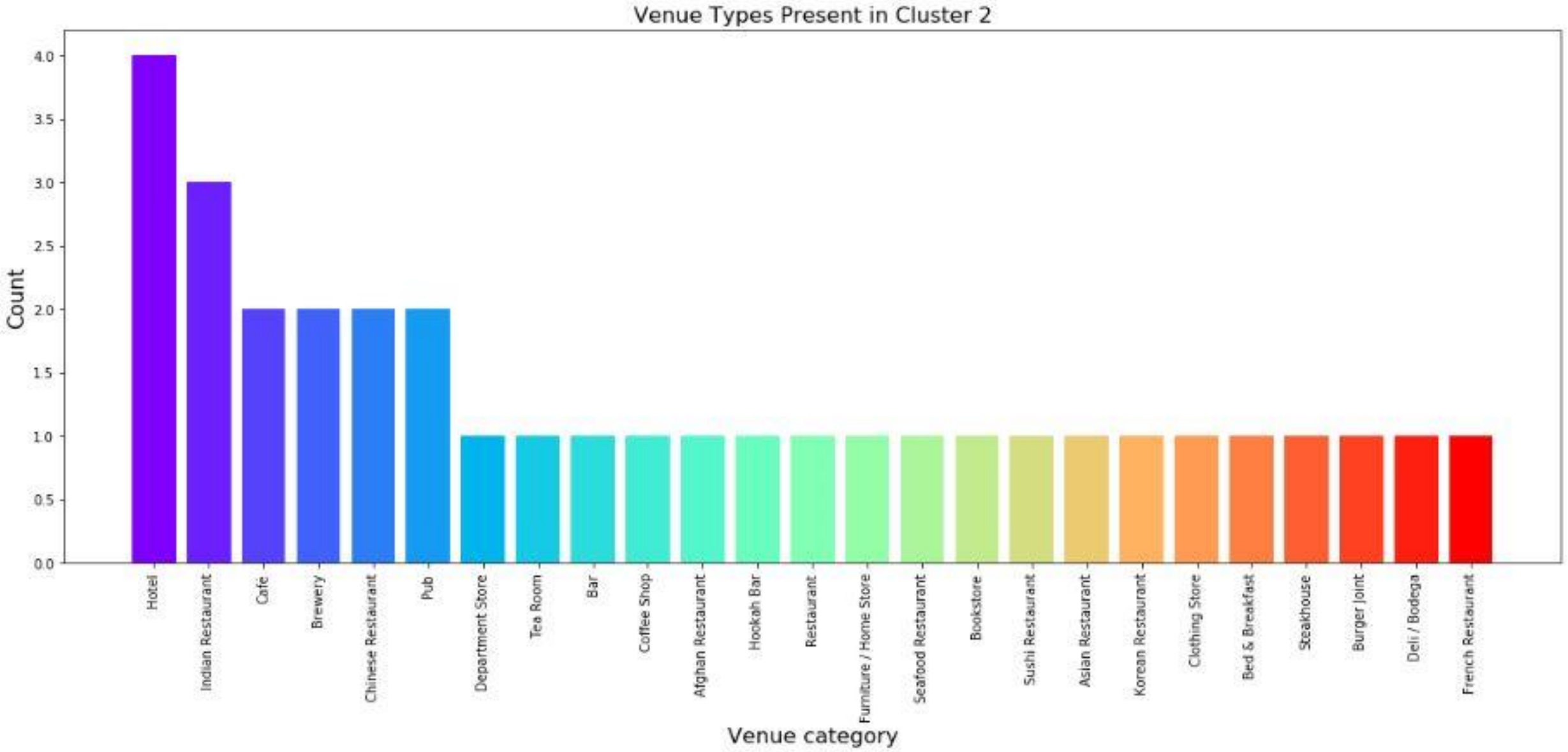
Map showing different Clusters of venues within 4km radius from center of Bengaluru.



Plot showing venue category vs number of venues in Cluster 0.



Plot showing venue category vs number of venues in Cluster 1.



Plot showing venue category vs number of venues in Cluster 2.

CONCLUSION

- In this project we explored different venues and predicted most dominant types of venues within 4km radius from the center of Bengaluru city.
- Using Foursquare API and Zomato API we obtained location data for different types of venues, their types, ratings and average price.
- The venues have been partitioned into 3 different clusters based on their price range and ratings using K means clustering algorithm and have been on a map.
- This analysis can be helpful for any person trying to find a suitable place for them when visiting the city.
- Any organization can use this information and build a website or mobile application and provide its users with updated information about carious venues in the city based on the search criteria (name, price, ratings) of its users.