

IBM DATA SCIENCE  
PROFESSIONAL CERTIFICATE

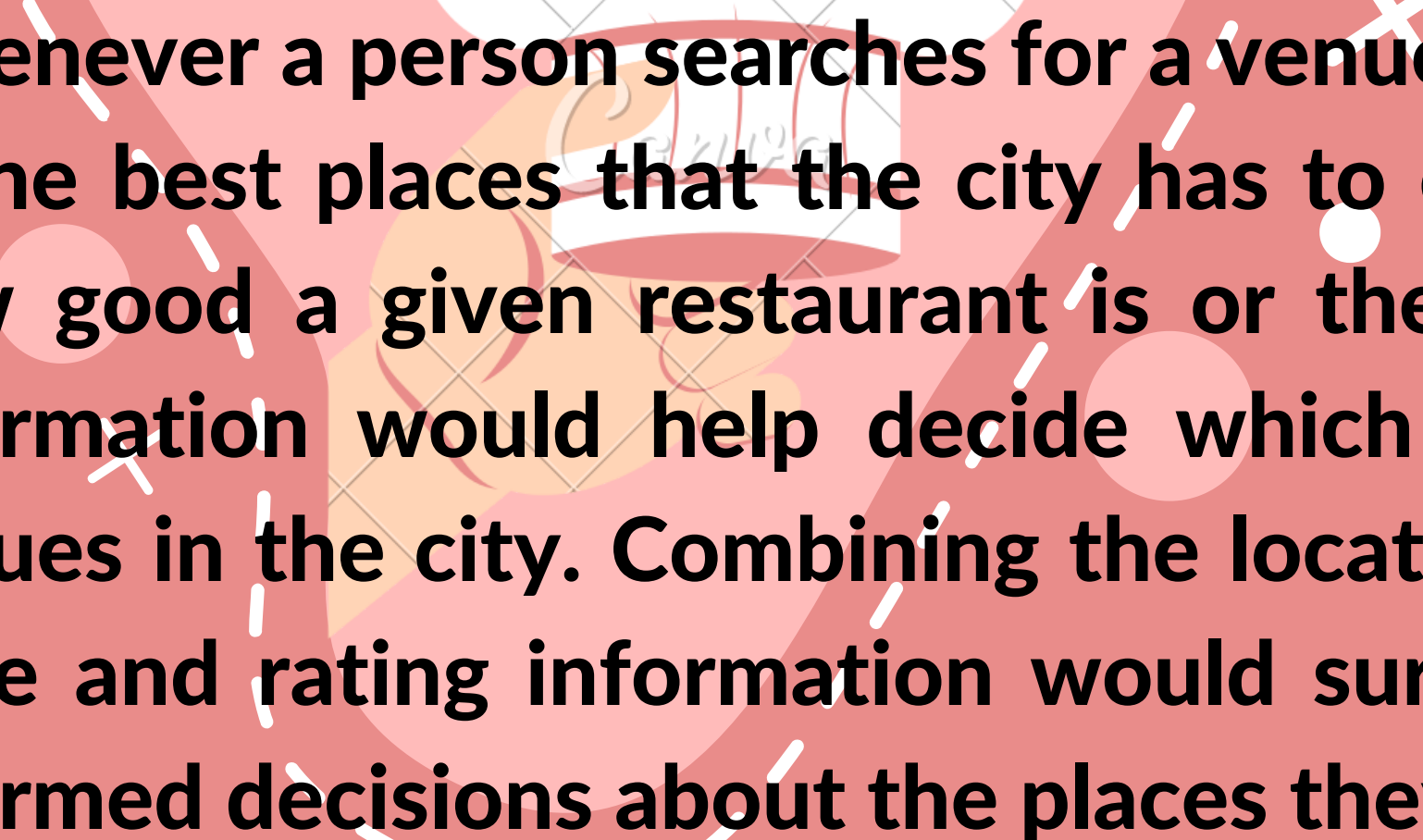
# **CAPSTONE PROJECT: BATTLE OF THE NEIGHBOURHOODS**

Jeeva K

Exploring venues in Coimbatore, India Using  
Foursquare and Zomato API



# INTRODUCTION BUSINESS PROBLEM

A decorative illustration on the left side of the slide features a white chef's hat with a grey grid pattern, positioned above a yellow hand holding a white notepad. The notepad contains a checklist with three items: 'Location', 'Price', and 'Rating', each followed by a red checkmark. The entire illustration is enclosed within a dashed white oval border. The background of the slide is a solid reddish-pink color with several faint, overlapping circles of varying shades.

**Whenever a person searches for a venue in a new city, they're highly interested in the best places that the city has to offer. The person might want to know how good a given restaurant is or the price range it falls under. This extra information would help decide which venue to choose amongst the many venues in the city. Combining the location of the venues in the city with their price and rating information would surely help visitors in a city make better informed decisions about the places they should visit.**

# DATA SOURCES

From Foursquare API (<https://developers.zomato.com/api>), I retrieved the following for each venue:

Name: The name of the venue.

Category: The category type as defined by the API.

Latitude: The latitude value of the venue.

Longitude: The longitude value of the venue.

From Zomato API (<https://developers.zomato.com/api>), I retrieved the following for each venue:

Name: The name of the venue.

Address: The complete address of the venue.

Rating: The ratings as provided by many users.

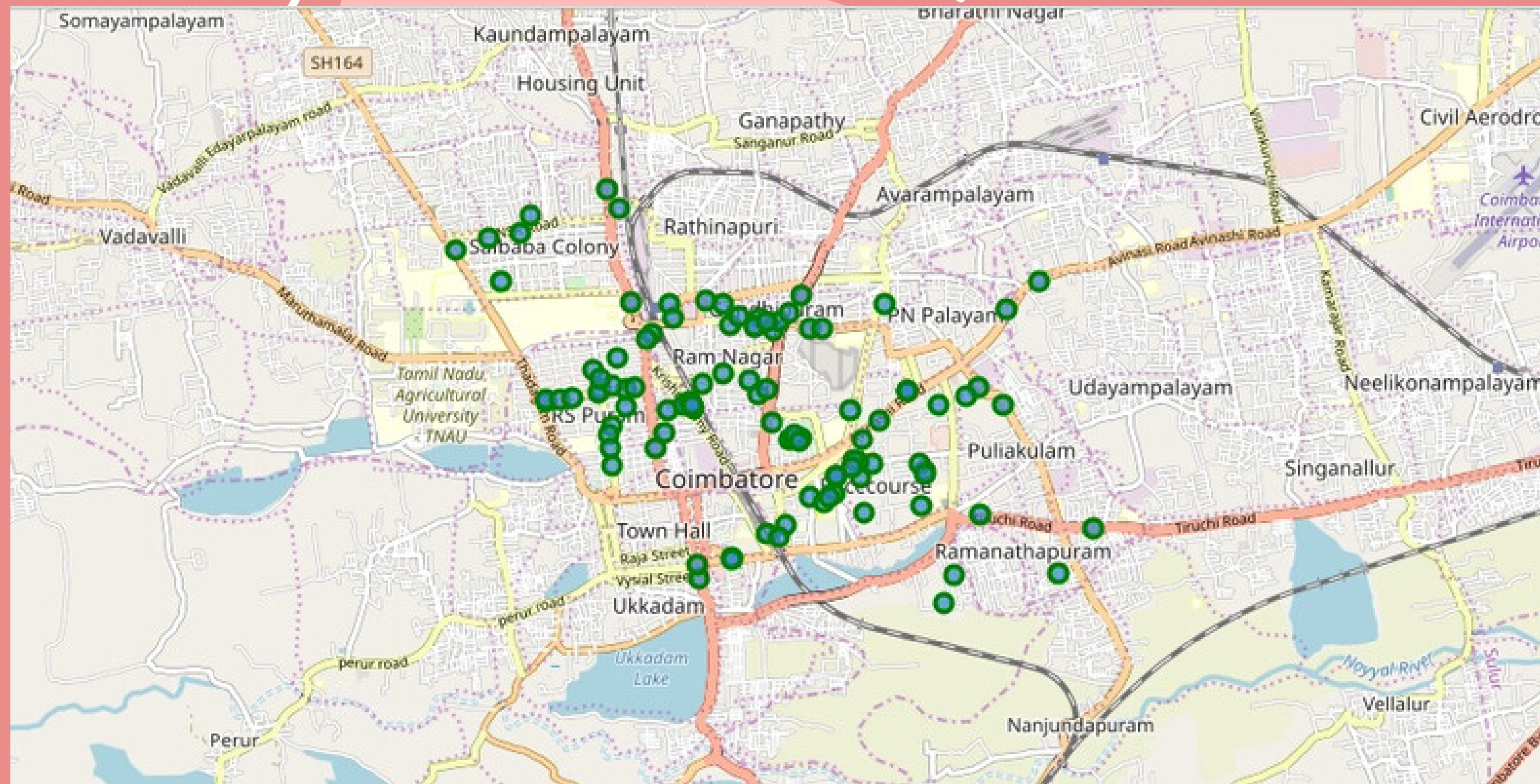
Price range: The price range the venue belongs to as defined by Zomato.

Price for two: The average cost for two people dining at the place. I later convert the same to average price per person by dividing by 2.

Latitude: The latitude value of the venue.

Longitude: The longitude value of the venue.

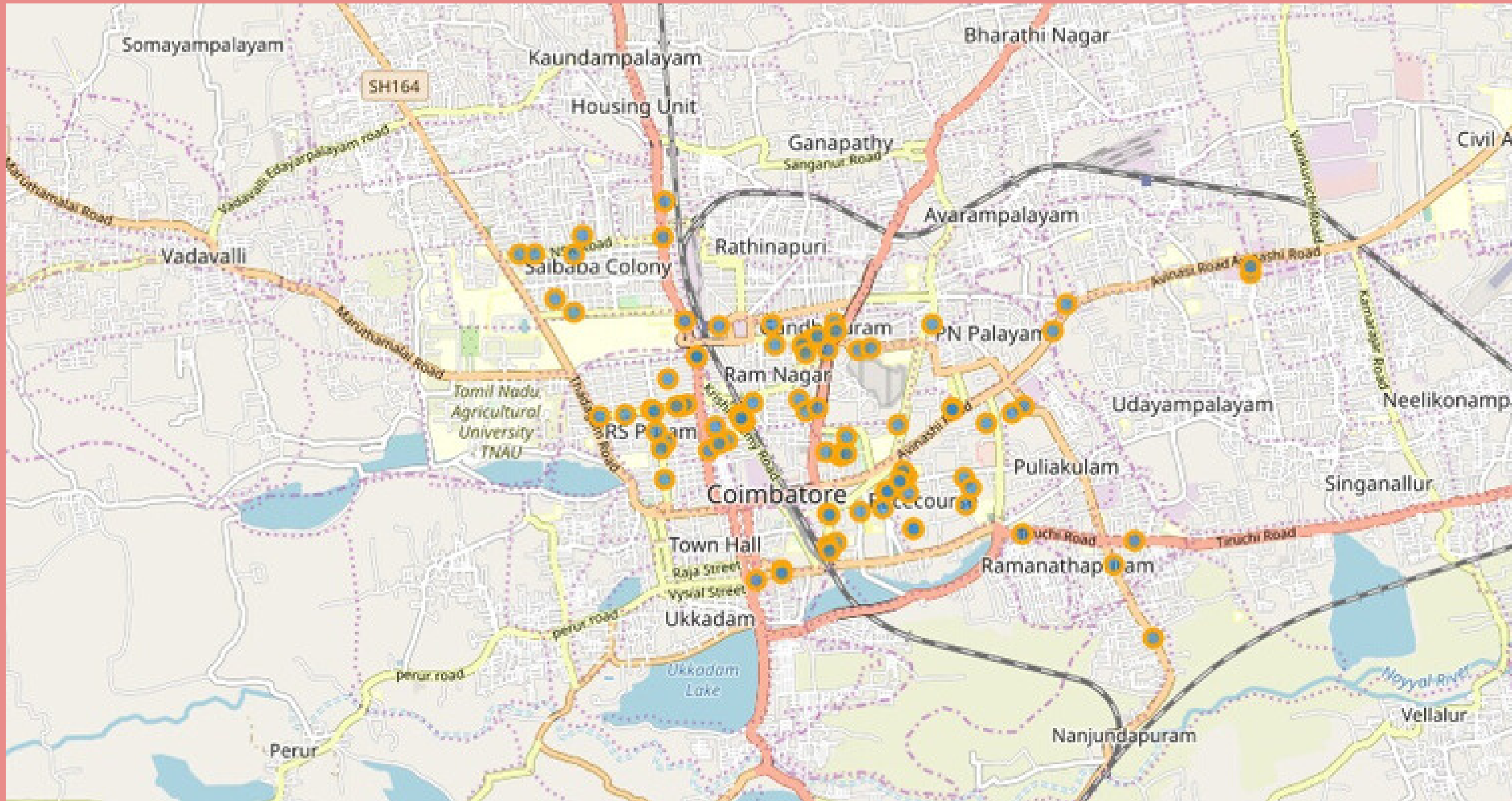
# DATA CLEANING



**Foursquare Venues**

# DATA CLEANING

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**Zomato Venues**

# DATA CLEANING

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## Final Data Set after Cleaning

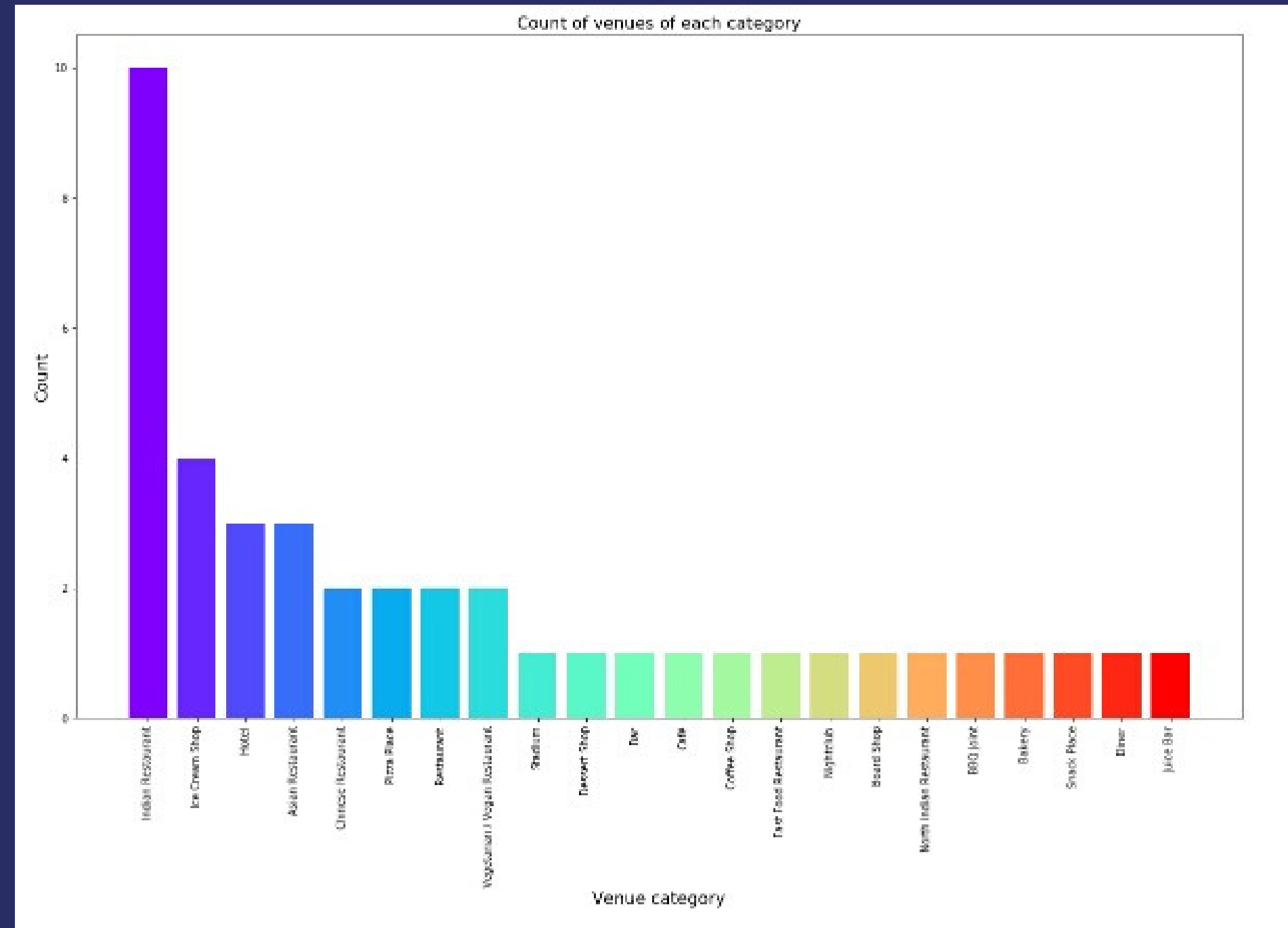
	name	categories	lat	lng	venue	latitude	longitude	price_for_two	price_range	rating	address	lat_diff	lng_diff
0	Brookefields Mall	Shopping Mall	11.0089	76.9594	Cafe Coffee Day	11.0089	76.9595	650.0	2.0	3.3	67-71, Inside Brookefields, Brooke Bond Road, R...	0.0000	0.0001
1	Vivanta by Taj - Surya, Coimbatore	Hotel	11.0020	76.9737	Smoke On The Water - Vivanta Coimbatore	11.0020	76.9739	3000.0	4.0	3.6	Vivanta Coimbatore, 105, Race Course Road, Coi...	0.0000	0.0002
2	Barbeque Nation	BBQ Joint	10.9942	76.9634	Barbeque Nation	10.9942	76.9634	1200.0	3.0	4.8	6th Floor, Metro Park Inn, 1000, Raja Street, ...	0.0000	0.0000
3	Junior Kuppana	Indian Restaurant	11.0113	76.9651	Hotel Junior Kuppana	11.0112	76.9651	500.0	2.0	4.2	177, Sarojini Street, Ram Nagar, Gandhipuram, ...	-0.0001	0.0000
4	Sree Annapoorna	Indian Restaurant	11.0069	76.9516	Sree Annapoorna Sweets & Savouries	11.0069	76.9517	200.0	1.0	0	75, East Arokiasamy Road, RS Puram, Coimbatore	0.0000	0.0001



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# Methodology and Exploratory Data Analysis

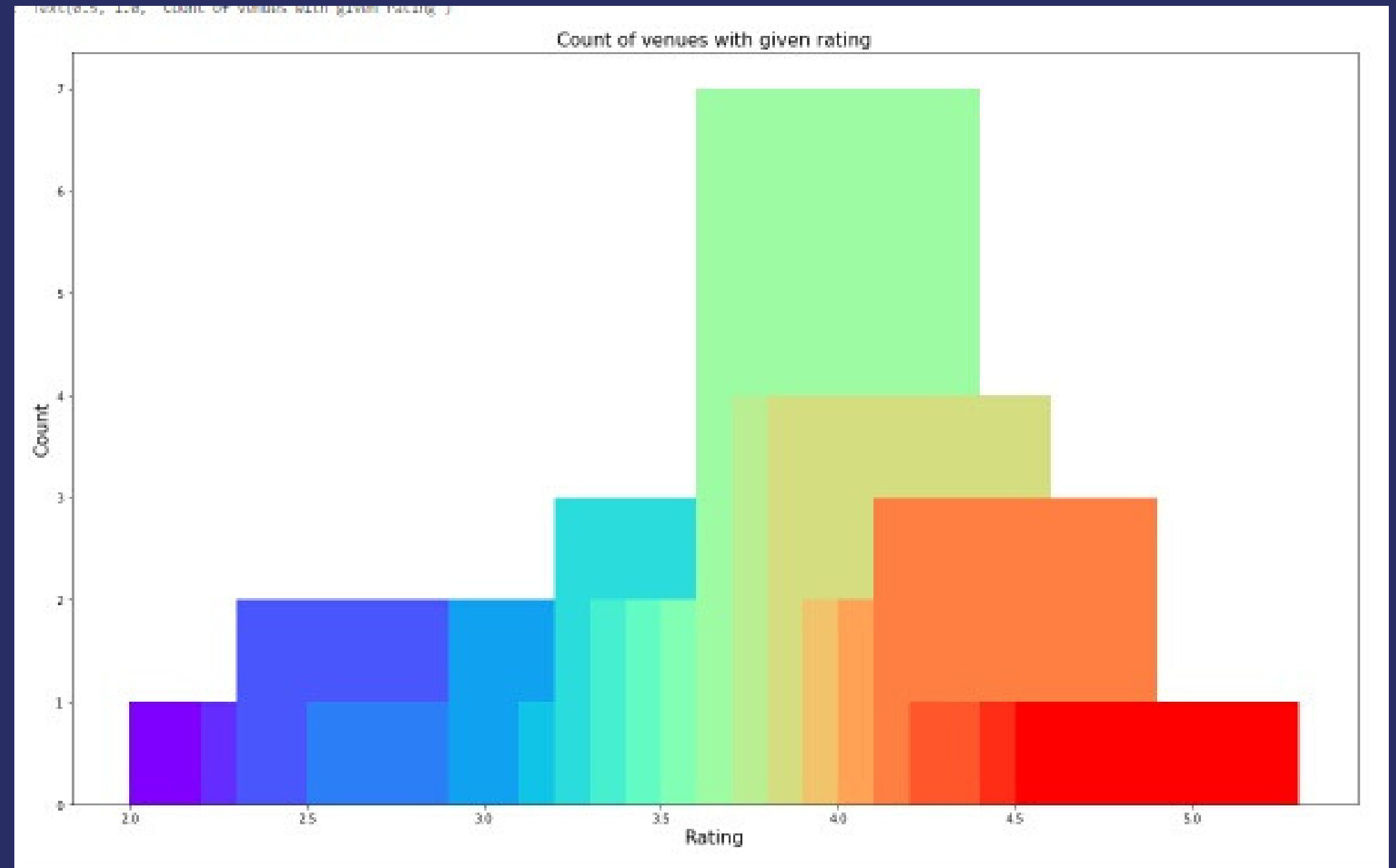
○  
● Categories



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# Methodology and Exploratory Data Analysis

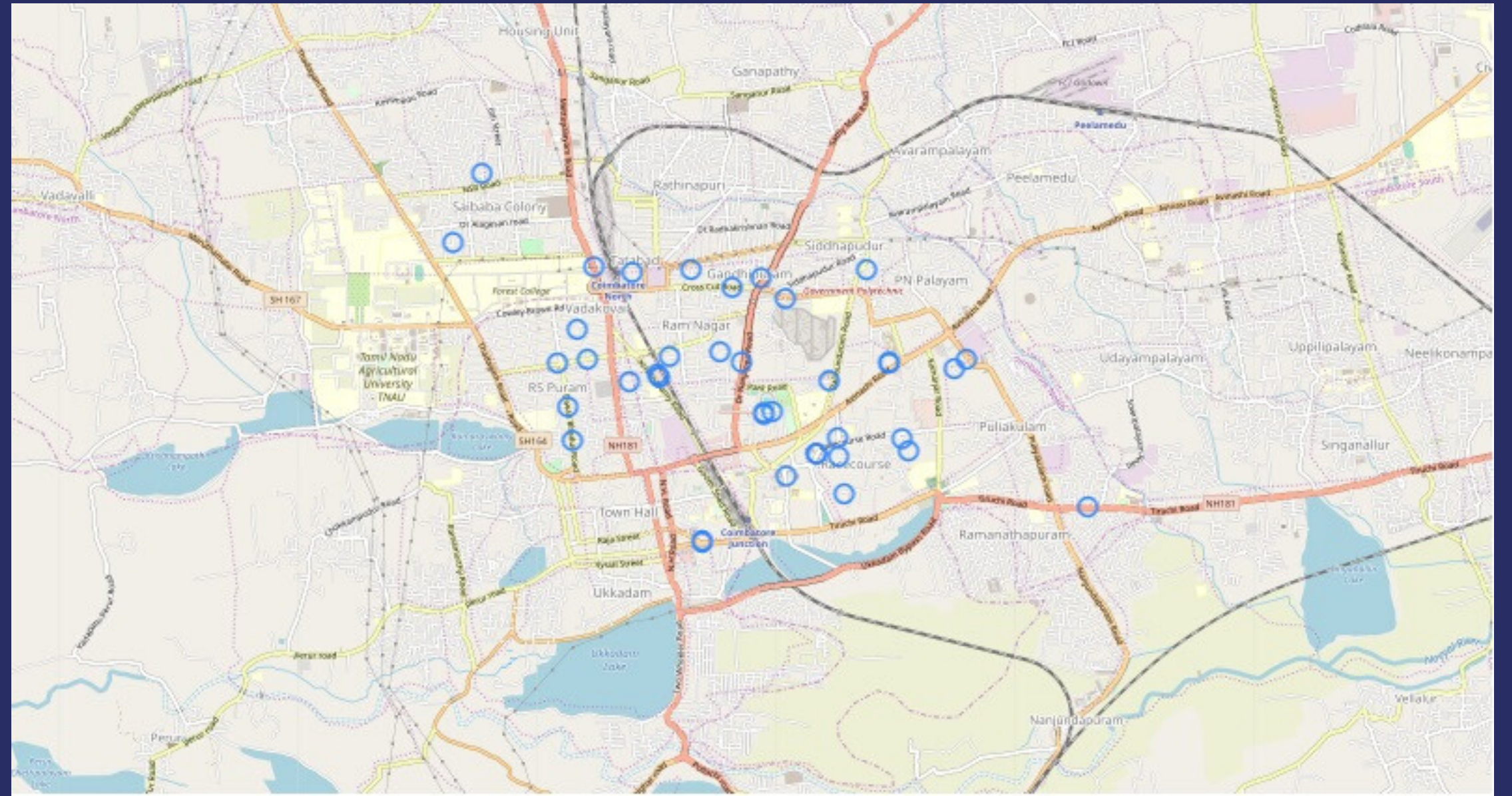
Rating





# Methodology and Exploratory Data Analysis

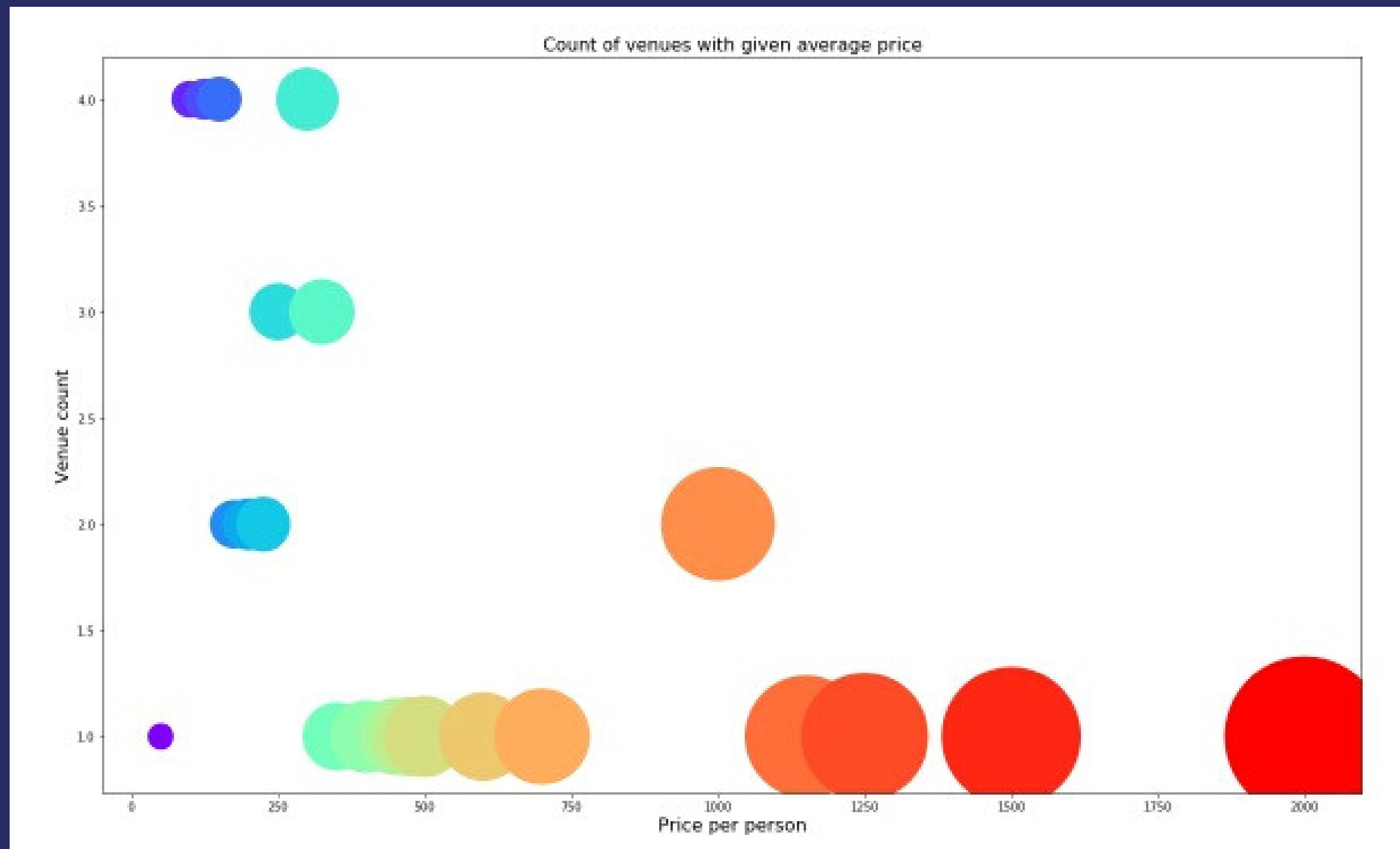
○  
● Categories



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# Methodology and Exploratory Data Analysis

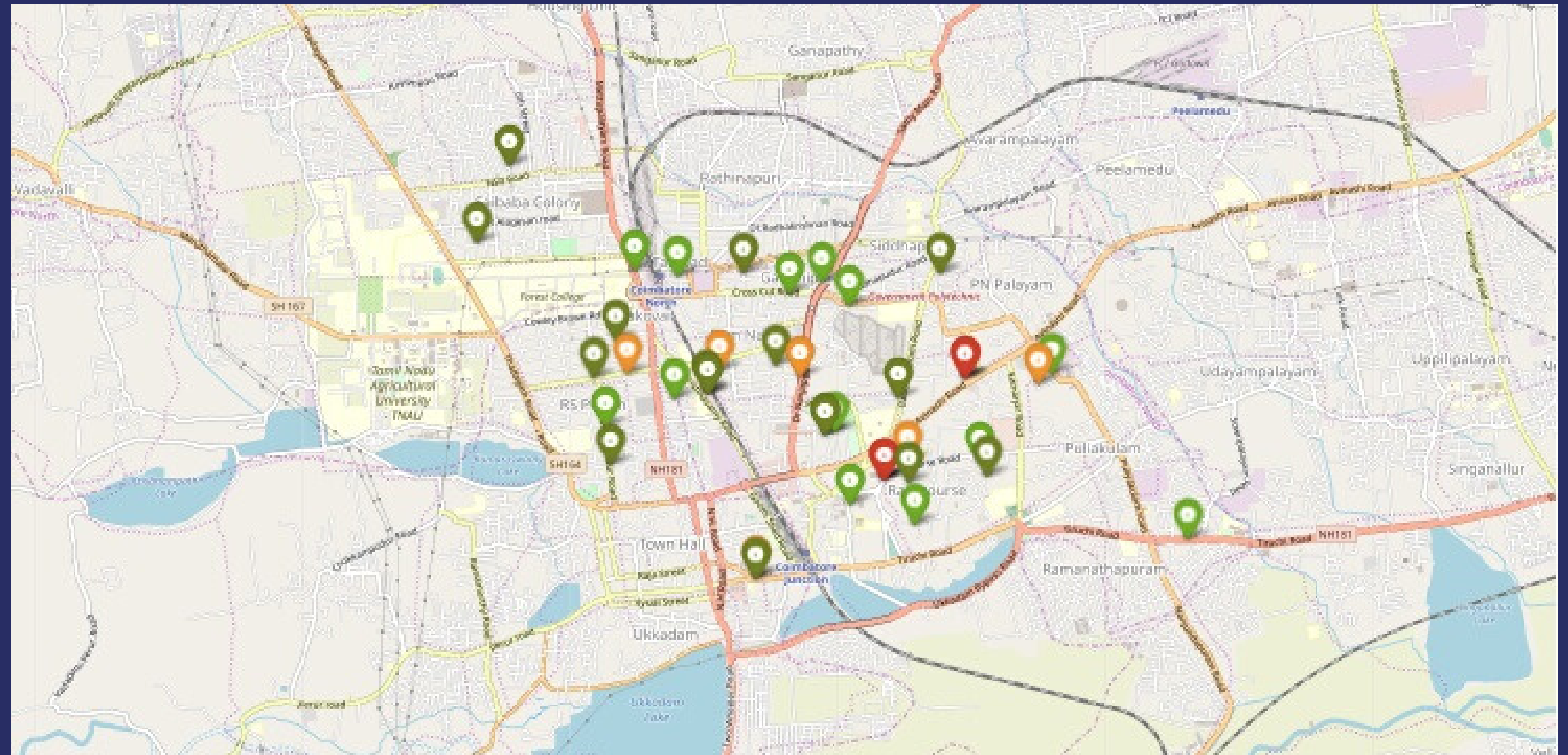
Price





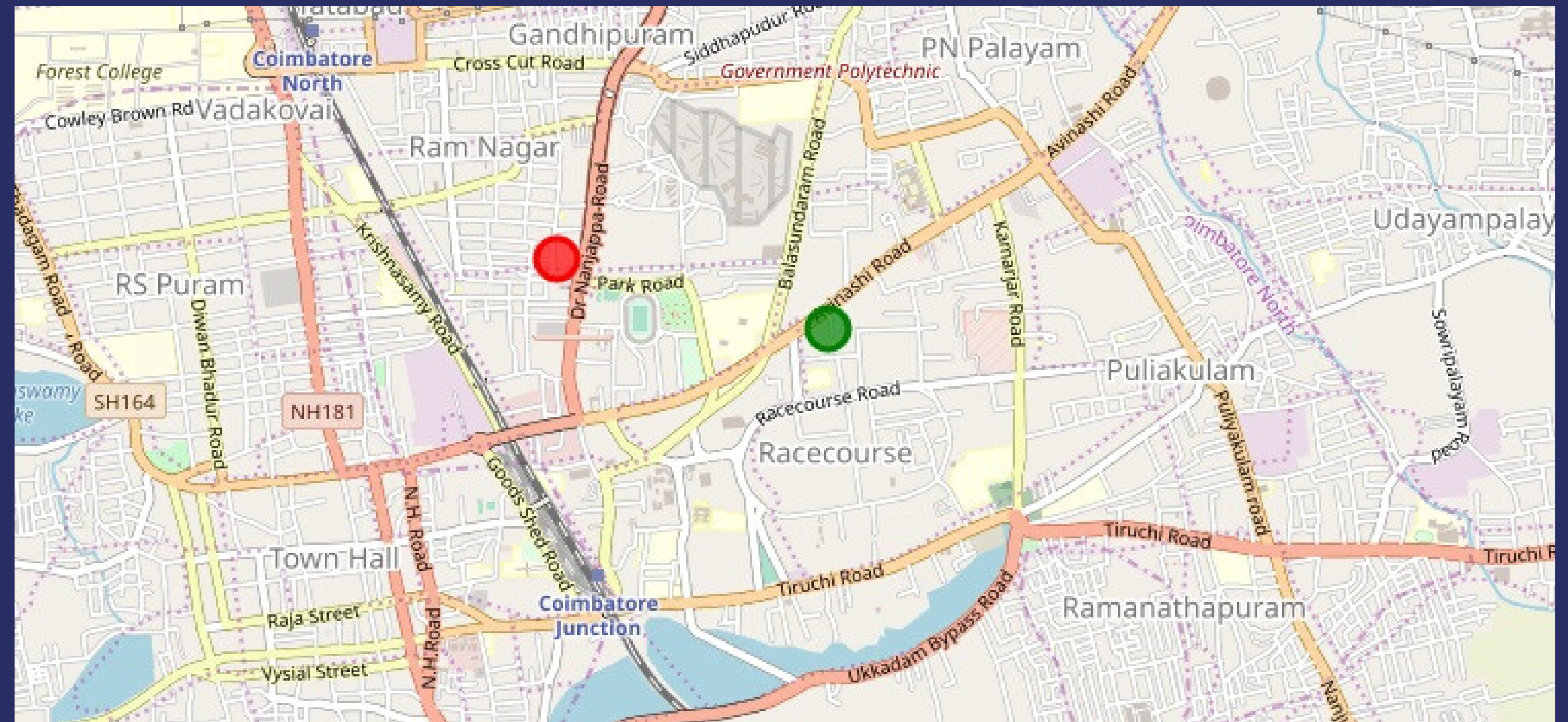
# Methodology and Exploratory Data Analysis

Venues Based  
on Price Range



# Methodology and Exploratory Data Analysis

Clustering



# RESULTS AND DISCUSSION

Finally, through clusters we identified that there are many venues which are relatively lower priced but have an average rating of 1.81. On the other hand, there are few venues which are high priced and have average rating of 3.95

1. If you're looking for cheap places with relatively high rating, you should check R.S Puram.

2. If you're looking for the best places, with the highest rating but might also carry a high price tag, you should visit Race Course.

A company can use this information to build an online website/mobile application, to provide users with up to date information about various venues in the city based on the search criteria (name, rating and price)

# CONCLUSION

**The purpose of this project was to explore the places that a person visiting Coimbatore could explore. The venues have been identified using Foursquare and Zomato API and have been plotted on the map. The map reveals that there are three major areas a person can visit: R.S Puram and Race Course. Based on the visitor's venue rating and price preferences, he/she can choose amongst the two places.**