

# **Zomato Ratings Prediction**

Mini Project Report submitted to Savitribai Phule Pune University, Pune



In partial Fulfillment for the awards of Degree of Engineering in  
Computer Engineering TE(Computer)

**Submitted by**

Ms.Rutuja Mane(Roll No.44)

Ms.Bhakti Gotarne(Roll No.25)

Ms.Bhakti More(Roll No.47)

Ms.Rutuja Sathe(Roll No.63)

**Under the Guidance of**

**Prof. Rupali Wagh**



**Department of Computer Engineering**  
**Parvatibai Genba Moze College Of**  
**Engineering, Wagholi, Pune**

(2022-23)

**Certificate**



This is to certify that We have successfully completed the Mini project entitled “**Zomato Restaurant Ratings Prediction**” under my guidance in partial fulfillment of the requirements for the Third Year of Engineering in Computer Engineering under the Savitribai Phule Pune University during the academic year 2022- 2023

**Prof. Rupali Wagh**  
**Project Guide**

**Prof. Shrikant Dhamdhare**  
**Head Of Department**

**Date :** \_\_\_\_\_ /     /

**Place :** Pune

## **Acknowledgements**

With deep sense of gratitude we would like to thank all the people who have lit our path with their kind guidance. We are very grateful to these intellectuals who did their best to help during our project work.

It is our proud privilege to express a deep sense of gratitude to **Prof. Dr. M . G. Jadhav**, Principal of Parvatibai Genba Moze College Of Engineering, Wagholi, Pune for his comments and kind permission to complete this project. We remain indebted to **Prof. Shrikant Dhamdhare**, H.O.D. Computer Engineering Department for his timely suggestion and valuable guidance. The special gratitude goes to (**Prof.**

**Rupali wagh**) excellent and precious guidance in completion of this work .We thanks to all the colleagues for their appreciable help for our working project. With various industry owners or lab technicians to help, it has been our endeavor throughout our work to cover the entire project work.

We are also thankful to our parents who provided their wishful support for our project completion successfully .And lastly we thank our all friends and the people who are directly or indirectly related to our project work.

Ms.Rutuja Mane(44)  
Ms.Bhakti Gotarane(25)  
Ms.Bhakti More(47)  
Ms.Rutuja Sathe(63)

## **Abstract**

Zomato is one of the best online food delivery apps which gives the users the ratings and the reviews on restaurants all over india.These ratings and the Reviews are considered as one of the most important deciding factors which determine how good a restaurant is.

We will therefore use the real time Data set with variuos features a user would look into regarding a restaurant. We will be considering Banglore City in this analysis.

Content The basic idea of analyzing the Zomato dataset is to get a fair idea about the factors affecting the establishment of different types of restaurant at different places in Bengaluru, aggregate rating of each restaurant, Bengaluru being one such city has more than 12,000 restaurants with restaurants serving dishes from all over the world.

With each day new restaurants opening the industry has'nt been saturated yet and the demand is increasing day by day. Inspite of increasing demand it however has become difficult for new restaurants to compete with established restaurants. Most of them serving the same food. Bengaluru being an IT capital of India. Most of the people here are dependent mainly on the restaurant food as they don't have time to cook for themselves.

With such an overwhelming demand of restaurants it has therefore become important to study the demography of a location. What kind of a food is more popular in a locality. Do the entire locality loves vegetarian food. If yes then is that locality populated by a particular sect of people for eg. Jain, Marwaris, Gujaratis who are mostly vegetarian. These kind of analysis can be done using the data, by studying the factors such as

- Location of the restaurant
- Approx Price of food
- Theme based restaurant or not
- Which locality of that city serves that cuisines with maximum number of restaurants
- The needs of people who are striving to get the best cuisine of the neighborhood
- Is a particular neighborhood famous for its own kind of food.



# Table of Contents

<b>Acknowledgements .....</b>	<b>3</b>
<b>Abstract .....</b>	<b>4</b>
<b>Chapter 1</b>	
1.1. Introduction .....	6
1.2.Objectives.....	7
<b>Chapter 2</b>	
.Aim.....	7
<b>Chapter 3</b>	
A description of the dataset.....	8
<b>Chapter 4</b>	
4.1 Tools used.....	9
4.2 Software/Hardware Requirements.....	9
<b>Chapter 5</b>	
5.1 Restaurant Name.....	10
5.2 Online orders.....	11
5.3 Book Table.....	11
5.4 Location of Restaurants.....	12
5.5 Dishes That bangalore liked.....	13
<b>Chapter 6</b>	
<b>Conclusion.....</b>	<b>14</b>

# Chapter 1

## 1.1. Introduction

With the rise of meal delivery services, everyone can now enjoy their favorite restaurant food from the comfort of their own home. Giant food aggregators and food shipping companies like Zomato have made it feasible. Zomato is one of India's most extensively used services for searching restaurants, ordering food online, making table reservations, etc. Bangalore, home to many restaurants and cuisines worldwide, has over 12,000 restaurants doing their business through systems like Zomato. This wide variety is exponentially increasing each day.

The goal of this article and its content is to comprehend the factors that influence the establishment of restaurants in various locations throughout Bangalore; these factors include aggregate consumer score, cuisines offered, type of service provided, and numerous others. With increasingly more eating places, it's becoming harder for restaurants to run successfully, particularly in a metropolitan metropolis like Bangalore. By studying the Zomato dataset, you can get deeper insights into some of the influencing factors that improve the functioning of a restaurant in Bangalore.

Today, we will investigate a dataset that carries approximate facts about the restaurant chains in Bangalore that also run on Zomato.

## 1.2. Objective

The analysis that we are going to perform shall answer the following questions:

- How many restaurants in Bangalore take online orders?
- What percentage of restaurants offer table booking facilities?
- What was the most common rating received by restaurants?
- Is there any correlation between the approximated cost for two people and the ratings of a restaurant?
- The top five cities in Bangalore with the highest and lowest-rated restaurants.
- Which cuisine do customers like the most?
- What is the average price for two people, based on the type of service?
- Does the restaurant's rating depend on whether it accepts online orders?
- What are the top 10 highest-rated restaurants?

## Chapter 2

### **Aim:**

The basic idea of analyzing the Zomato dataset is to get a fair idea about the factors affecting the establishment of different types of the restaurant at different places in Bengaluru, aggregate rating of each restaurant, Bengaluru being one such city has more than 12,000 restaurants with restaurants serving dishes from all over the world. With each day new restaurants opening the industry hasn't been saturated yet and the demand is increasing day by day. In spite of increasing demand it, however, has become difficult for new restaurants to compete with established restaurants. Most of them serving the same food. Bengaluru being an IT capital of India. Most of the people here are dependent mainly on the restaurant food as they don't have time to cook for themselves.

# Chapter 3

## A description of the dataset:

The dataset has been taken from Kaggle. It contains around 51717 rows and 17 columns of data. The attributes in the dataset are as follows:

1. **URL:** The restaurant's website URL
2. **address:** Address of the restaurant
3. **name:** Name of the restaurant
4. **online\_orders:** It specifies if the restaurant takes online orders or not.
5. **book\_table:** Indicates whether or not the restaurant offers table reservations.
6. **rate:** The restaurant's rating out of 5
7. **votes:** Number of votes received by the restaurant on Zomato
8. **phone:** the restaurant's phone number
9. **location:** the neighborhood in which the restaurant is located.
10. **rest\_type:** *specifies the type of restaurant.*
11. **disk\_liked:** Indicates which dishes were popular among customers in that restaurant.
12. **Cuisines:** Cuisines available at the restaurant
13. **approx\_cost (for two people):** Estimated cost of food in that restaurant for two people.
14. **Reviews\_list:** Reviews given by users
15. **menu\_item:** The restaurant's menu
16. **listed\_in(type):** Specifies the type of service provided by a restaurant
17. **listed\_in(city):** The restaurant is on the city's list.



## **Chapter 4**

### **4.1 Tools used:**

- python 3.6
- Numpy
- Pandas
- Matplotlib
- Seaborn
- Data science
- Machine learning

### **4.2 Software/Hardware Requirements:**

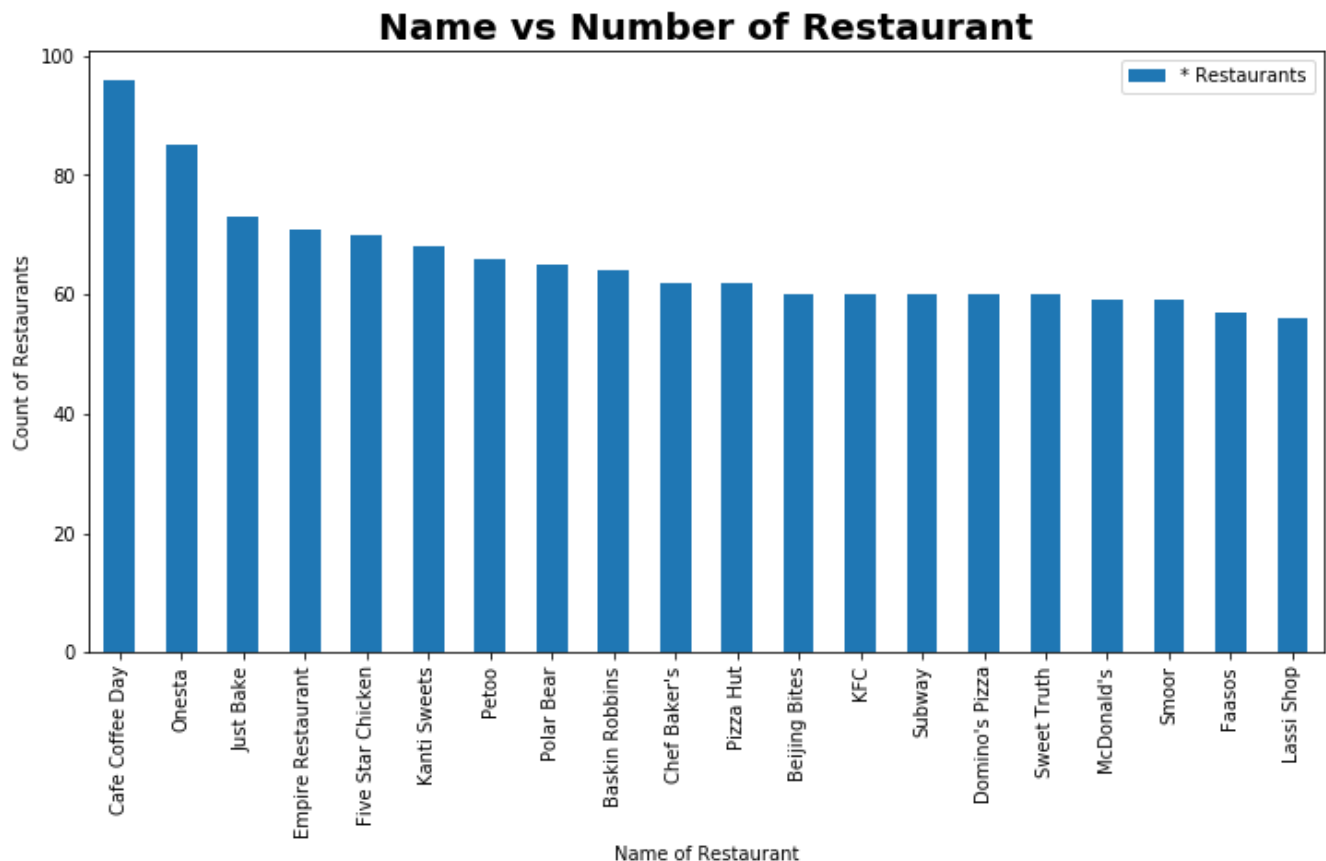
1.Windows 11 operating System

2.Google colab

## **Chapter 5**

## 5.1 Restaurant Name:-

We have a Feature/Column called Name that says about all the Restaurants that tie/partnered with zomato in Bangalore. We have several Restaurants few named like Cafe Coffee Day, Onesta, Just Bake, Kranti sweets and more.



from the above graph, we can see that we almost have 100 restaurants for the Franchise of **Cafe Coffee Day**.

## 5.2 Online orders:-

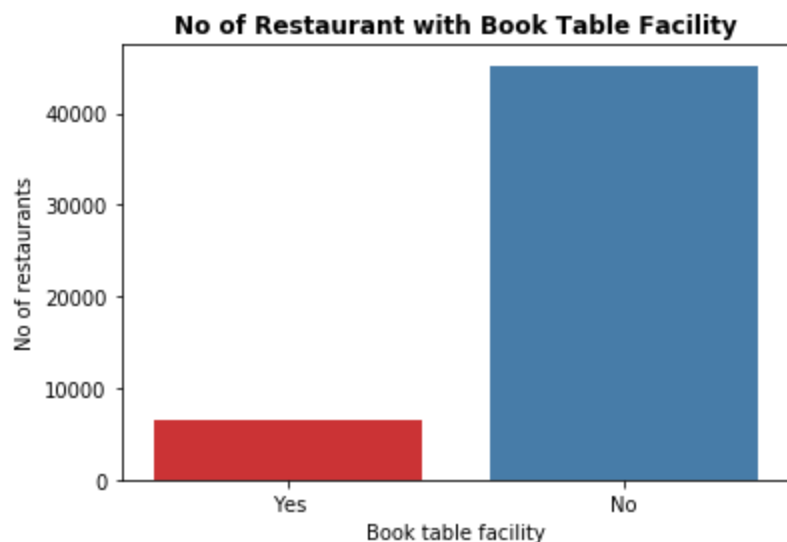
Of all the registered Restaurants in zomato, How many are Accepting online orders and how many are not accepting. from the graph below you can understand that we have almost 30,000 Restaurants in

Bangalore that Accepts online orders through zomato and Almost of 20,000 are not accpeting any online orders through zomato.



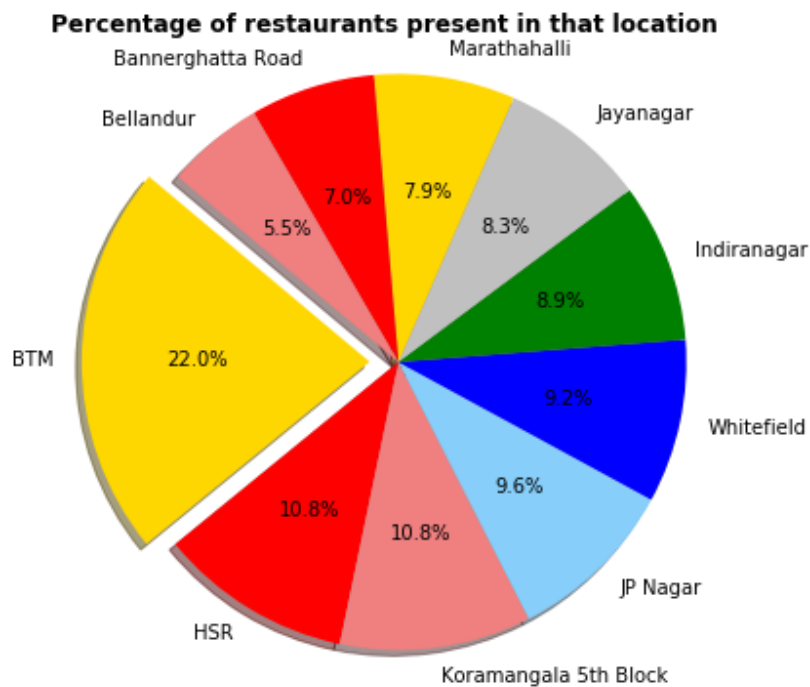
### 5.3 Book table:-

As similar we have several Restaurants with Book table facility and few dont have. After analysing the Data we have we come to know that out of all the Registered 51,000 restaurants only A 10,000 are accepting Book table facility.



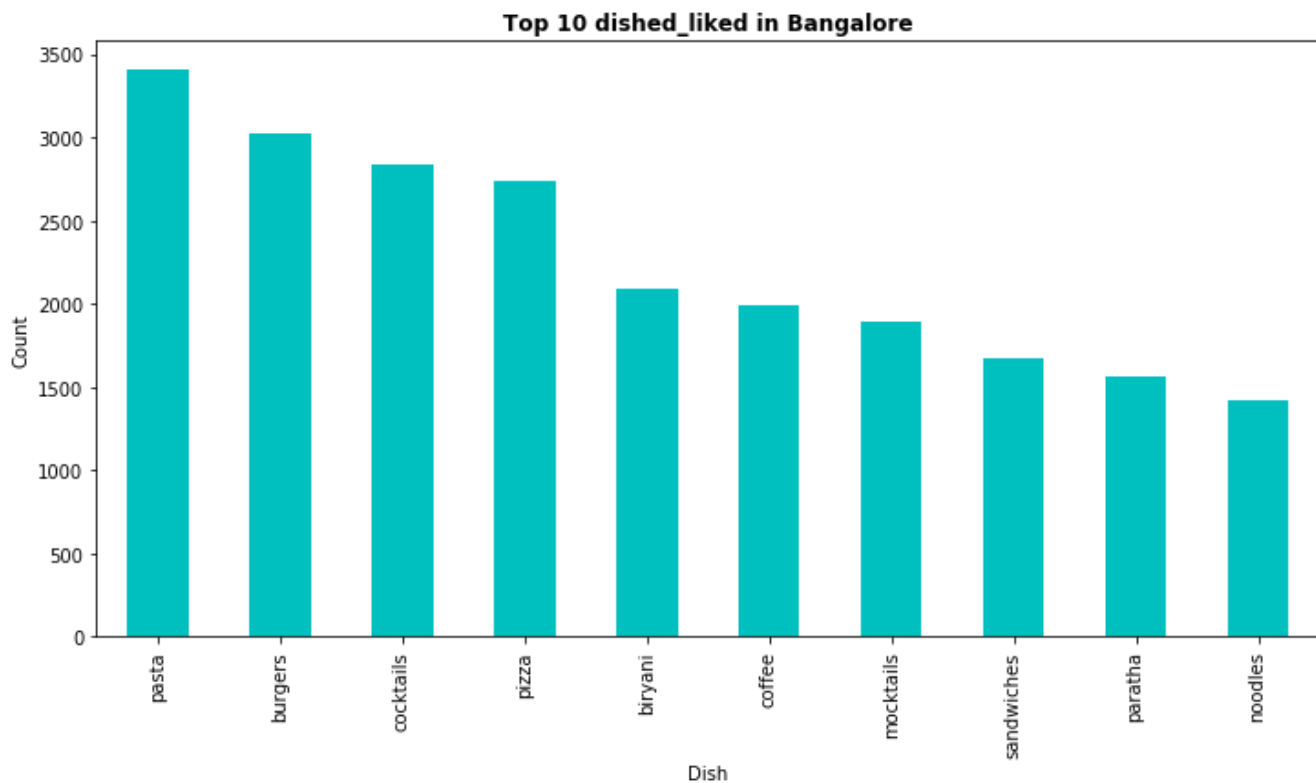
#### 5.4 Location of Restaurants:-

We have overall 93 locations where all the 51,000 Restaurants lie. Let's see which one has More restaurants in Each location. We know that pie graph is always a composition of 100% and From the Pie Graph below you can see only The Top 10 Restaurants out of many.



### 5.5 Dishes That Bangalore liked:-

We have a Feature/Column called Dishes\_liked, which tells about all the different dish types that people in Bangalore likes. Dishes such Pasta, Burgers, Pizza, Biryani, Sandwiches, paratha and so on. lets see from the graph to know,What is the Bangalore most liked Food.



## Chapter 6

### Conclusion:

- From the analysis, '**Onesta**', '**Empire Restaurant**' & '**KFC**' are the most famous restaurants in bangalore.
- Most Restaurants offer options for online order and delivery.
- Most restaurants don't offer table booking.
- From the analysis, most of the ratings are within 3.5 and 4.5.
- From the analysis. we can see that most of the restaurants located in '**Koramangala 5th Block**', '**BTM**' & '**Indiranagar**'.Then least restaurants are located '**KR Puram**', '**Kanakapura**', '**Magadi Road**'.
- '**Casual Dining**', '**Quick Bites**', '**Cafe**', '**Dessert Parlor**' are the most common types of restaurant.And '**Food Court**', '**Casual Dining**', '**Dhaba**' are the least common.
- From the analysis, **pasta** & **Pizza** most famous food in bangalore restaurants.
- From the analysis, we can see that **North Indian** Cuisines are most famous in bangalore restaurants.

- Two main service types are **Delivery** and **Dine-out**.
- From the analysis, we can see that '**Onesta**', '**Truffles**' & '**Empire Restaurant**' are highly voted restaurants.
- For the modeling part, i used **LinearRegression**, **DecisionTree Regressor**, **RandomForest Regressor** , **Supprotvector Regressor** & **ExtraTree Regressor**. From all these models **ExtraTree Regressor** perform well compared to the other models.So i selected **ExtraTree Regressor** for model creation.