RAMNIRANJAN JHUNJHUNWALA COLLEGE

Department of DSAI

Ghatkopar (West), Mumbai - 400086

2021-2022

Mini-Project Report
On
EDA ANALYSIS ON ZOMATO

In partial fulfillment of M.Sc. (DSAI Sem I)

By

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Project Guide

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RAMNIRANJAN JHUNJHUNWALA COLLEGE (AUTONOMOUS)

(Affiliated to University of Mumbai)

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Certificate

This is to certify that the Project entitled, "**EDA ANALYSIS ON ZOMATO**" is bonafide work of **Mr. Manoj H. Yadav** bearing **Seat No: - 43** submitted in partial fulfilment of the requirements for the award of Degree Master of Science in DSAI,

Signature of Internal Guide

Sign of Co-Ordinator

Examiner

Date:

College Seal

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Secondly I would also like to thank my parents and friends who helped me a lot in finalizing this project within the limited time frame.

Abstract

Zomato, an online restaurant discovery platform where customers can find restaurants in a particular area, their menu, place order and pay online. Delivery part is taken care by the restaurants. Moreover, customers can give their review about the restaurants and the quality of food which help the restaurants and other customers to have a better experience. Internet and mobile app are the only channel used for the whole process for customers to find a suitable restaurant with better discount deals and place an order. First restaurants review than placing order now Zomato wants to start delivering the ordered food to customer's doorstep by their own, which was earlier taken care by the restaurants only.

Chapter 1

Introduction

Zomato is an Indian restaurant aggregator and food delivery start-up founded by Pankaj Chaddah and Deepinder Goyal in 2008. Zomato provides information, menus and user-reviews of restaurants as well as food delivery options from partner restaurants in select cities.

Founder(s): Deepinder Goyal; Pankaj Chaddah

Key people: Deepinder Goyal; (Founder and C...

Industry: Online food ordering

Services: Food delivery

Zomato

Type	Private
Industry	Online food ordering
Founded	July 2008; 12 years ago
Founder	Deepinder Goyal[1] Pankaj Chaddah
Headquarters	Gurgaon, Haryana, India
Area served	24 countries
Key people	Deepinder Goyal (CEO) Gaurav Gupta (COO)
Services	Food delivery[2]
Revenue	▲ ₹2,486 crore (US$350 million) (2020)[3]
Number of employees	5,000+ [4]
Parent	Info Edge (27.6%) Ant Financial (23%)[5] Uber (9.99%)[6]
Website	zomato.com

Zomato, an online restaurant discovery platform where customers can find restaurants in a particular area, their menu, place order and pay online. Delivery part is taken care by the restaurants. Moreover, customers can give their review about the restaurants and the quality of food which help the restaurants and other customers to have a better experience. Internet and mobile app are the only channel used for the whole process for customers to find a suitable restaurant with better discount deals and place an order. First restaurants review than placing order now Zomato wants to start delivering the ordered food to customer's doorstep by their own, which was earlier taken care by the restaurants only.

Investments

Between 2010 and 2013, Zomato raised approximately US$16.7 million from Info Edge India, giving Info Edge India a 57.9% stake in Zomato. In November 2013, it raised an additional US$37 million from Sequoia Capital and Info Edge India.

In November 2014, Zomato completed another round of funding of US$60 million at a post-money valuation of ~US$660 million. This round of funding was being led jointly by Info Edge India and Vy Capital, with participation from Sequoia Capital.

While in April 2015, Info Edge India, Vy Capital and Sequoia Capital led another round of funding for US$50 million. This was followed by another US$60 million funding led by Temasek, a Singapore government-owned investment company, along with Vy Capital in September.

In October 2018, Zomato raised $210 million from Alibaba's payment affiliate Ant Financial. Ant Financial received an ownership stake of over 10% of the company as part of the round, which valued Zomato at around $2 billion.

Zomato had also raised an additional $150 million also from Ant Financial earlier in 2018.

In September 2020, Zomato raised $62 million from Temasek, after previously committed capitol from Ant Financial never came through.

In October 2020, as part of a Series J round of funding, Zomato raised $52 million from Kora, a US-based Investment firm.

In February 2021, Zomato raised US$250 million from five investors, including Tiger Global Management, at a valuation of US$5.4 billion.

Acquisitions

Zomato has acquired 12 startups globally.

- In July 2014, Zomato made its first acquisition by buying Menu-mania for an undisclosed sum.
- The company pursued other acquisitions including lunchtime.cz and obedovat.sk for a combined US$3.25 million.
- In September 2014, Zomato acquired Poland-based restaurant search service Gastronauci for an undisclosed sum.
- In December 2014, it acquired Italian restaurant search service Cibando.

- Zomato also acquired Seattle-based food portal, Urbanspoon, for an estimated $60 million in 2015.
- Other acquisitions of 2015 include Mekanist in an all-cash deal, the Delhi-based startup MapleGraph that built MaplePOS (renamed Zomato Base), and NexTable, a US-based table reservation and restaurant management platform.

- In 2016, the company acquired Sparse Labs, a logistics technology startup, and the food delivery startup, Runnr, in 2017 (renamed from Roadrunnr when it acquired TinyOwl in 2016).

- In September 2018, Zomato acquired Bengaluru-based food e-marketplace, TongueStun Food, for about $18 million in a cash and stock deal.
- In December 2018, Zomato acquired Lucknow-based startup, TechEagle Innovations, that works exclusively on drones, for an undisclosed amount. Zomato claimed that the acquisition will help pave the way towards drone-based food delivery in India, building technology aimed at a hub-to-hub delivery network.

- On 21 January 2020, Zomato acquired its rival Uber Eats' business in India in an all stock deal, giving Uber Eats 10% of the combined business.

Security breaches

On 4 June 2015, an Indian security researcher hacked the Zomato website and gained access to information about 62.5 million users.

On 18 May 2017, a security blog called Hack read claimed over 17 million accounts had been breached. "The database includes emails and password hashes of Zomato users, while the price was set for the whole package is $1,001.43 (Bitcoins 0.5587). The vendor also shared a trove of sample data to prove it is legit", the Hackread's post said.

Controversies

"Food has no religion" tweet

In July 2019, Zomato received a customer complaint that he was assigned a non-Hindu delivery boy for his food order in Jabalpur and had asked Zomato to provide a Hindu delivery boy. The customer alleged that Zomato had refused to change the rider after which he asked to cancel the order. The customer then posted this incident on Twitter, after which Zomato responded to the message stating: "Food doesn't have a religion. It is a religion." The tweet received mixed responses, and some Twitter users further criticised the company for using Jain food and halal tags on food items. Zomato then issued a clarification that these tags were placed by restaurant owners and not by Zomato.

Logout campaign

On 17 August 2019, more than 1,200 restaurants logged off from Zomato because of their offer of discount programmes at dine-in restaurants.

Chapter II

Problem Define

1. collecting data sets and importing the libraries

2. Data cleaning

1. Deleting redundant columns.
2. Renaming the columns
3. Dropping duplicates
4. Cleaning individual columns
5. Remove the Nan values from dataset

3. Data visualization :- using plots to find relations between the features

1. Restaurants delivering online or not
2. Restaurants allowing table booking or not
3. Table booking rate
4. Relation between location and rating
5. Restaurants type
6. Type of services
7. Cost of restaurants

Solution

Code :-

Github path :-

https://github.com/Manoj123-github/DSAI/blob/main/EDA%20Analysis%20on%20Zomato%20.ipynb

```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
plt.style.use('ggplot')
import seaborn as sb
import seaborn as sns
import utils

df = pd.read_csv( 'C:/Users/Manoj Yadav/Desktop/Project/zomato.csv' )
df.head()
```

	url	address	name	online_order	book_table	rate	votes	phone	location	rest_type	dish_
0	https://www.zomato.com/bangalore/jalsa-banasha...	942, 21st Main Road, 2nd Stage, Banashankari, ...	Jalsa	Yes	Yes	4.1/5	775	080 42297555\r\n+91 9743772233	Banashankari	Casual Dining	P L B M P P L
1	https://www.zomato.com/bangalore/spice-elephan...	2nd Floor, 80 Feet Road, Near Big Bazaar, 6th ...	Spice Elephant	Yes	No	4.1/5	787	080 41714161	Banashankari	Casual Dining	Mo L B Choc Nir Tha
2	https://www.zomato.com/SanchurroBangalore?cont...	1112, Next to KIMS Medical College, 17th Cross...	San Churro Cafe	Yes	No	3.8/5	918	+91 9663487993	Banashankari	Cafe, Casual Dining	Chu Canne Mines Soup Cl
3	https://www.zomato.com/bangalore/addhuri-udupi...	1st Floor, Annakuteera, 3rd Stage, Banashankar...	Addhuri Udupi Bhojana	No	No	3.7/5	88	+91 9620009302	Banashankari	Quick Bites	M
4	https://www.zomato.com/bangalore/grand-village...	10, 3rd Floor, Lakshmi Associates, Gandhi Baza...	Grand Village	No	No	3.8/5	166	+91 8026612447\r\n+91 9901210005	Basavanagudi	Casual Dining	Pan Gol G

```
print("\n*** Columns ***")
print(df.columns)
print
```

```
*** Columns ***
Index(['url', 'address', 'name', 'online_order', 'book_table', 'rate', 'votes',
       'phone', 'location', 'rest_type', 'dish_liked', 'cuisines',
       'approx_cost(for two people)', 'reviews_list', 'menu_item',
       'listed_in(type)', 'listed_in(city)'],
      dtype='object')

<function print>
```

print("\n*** Structure ***")

print(df.info())

```
*** Structure ***
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 51717 entries, 0 to 51716
Data columns (total 17 columns):
 #   Column                       Non-Null Count  Dtype
---  ------                       --------------  -----
 0   url                          51717 non-null  object
 1   address                      51717 non-null  object
 2   name                         51717 non-null  object
 3   online_order                 51717 non-null  object
 4   book_table                   51717 non-null  object
 5   rate                         43942 non-null  object
 6   votes                        51717 non-null  int64
 7   phone                        50509 non-null  object
 8   location                     51696 non-null  object
 9   rest_type                    51490 non-null  object
 10  dish_liked                   23639 non-null  object
 11  cuisines                     51672 non-null  object
 12  approx_cost(for two people)  51371 non-null  object
 13  reviews_list                 51717 non-null  object
 14  menu_item                    51717 non-null  object
 15  listed_in(type)              51717 non-null  object
 16  listed_in(city)              51717 non-null  object
dtypes: int64(1), object(16)
memory usage: 6.7+ MB
None
```

print("\n*** Summary ***")

print(df.describe())

```
*** Summary ***
              votes
count  51717.000000
mean     283.697527
std      803.838853
min        0.000000
25%        7.000000
50%       41.000000
75%      198.000000
max    16832.000000
```

df.head(2)

	url	address	name	online_order	book_table	rate	votes	phone	location	rest_type	dish_liked	cu
0	https://www.zomato.com/bangalore/jalsa-banasha...	942, 21st Main Road, 2nd Stage, Banashankari, ...	Jalsa	Yes	Yes	4.1/5	775	080 42297555\r\n+91 9743772233	Banashankari	Casual Dining	Pasta, Lunch Buffet, Masala Papad, Paneer Laja...	M C
1	https://www.zomato.com/bangalore/spice-elephan...	2nd Floor, 80 Feet Road, Near Big Bazaar, 6th ...	Spice Elephant	Yes	No	4.1/5	787	080 41714161	Banashankari	Casual Dining	Momos, Lunch Buffet, Chocolate Nirvana, Thai G...	Cl

df.iloc[:,0:4].head()

	url	address	name	online_order
0	https://www.zomato.com/bangalore/jalsa-banasha...	942, 21st Main Road, 2nd Stage, Banashankari, ...	Jalsa	Yes
1	https://www.zomato.com/bangalore/spice-elephan...	2nd Floor, 80 Feet Road, Near Big Bazaar, 6th ...	Spice Elephant	Yes
2	https://www.zomato.com/SanchurroBangalore?cont...	1112, Next to KIMS Medical College, 17th Cross...	San Churro Cafe	Yes
3	https://www.zomato.com/bangalore/addhuri-udupi...	1st Floor, Annakuteera, 3rd Stage, Banashankar...	Addhuri Udupi Bhojana	No
4	https://www.zomato.com/bangalore/grand-village...	10, 3rd Floor, Lakshmi Associates, Gandhi Baza...	Grand Village	No

df.tail()

	url	address	name	online_order	book_table	rate	votes	phone	location	rest_type	dish_liked
51712	https://www.zomato.com/bangalore/best-brews-fo...	Four Points by Sheraton Bengaluru, 43/3, White...	Best Brews - Four Points by Sheraton Bengaluru...	No	No	3.6 /5	27	080 40301477	Whitefield	Bar	NaN
51713	https://www.zomato.com/bangalore/vinod-bar-and...	Number 10, Garudachar Palya, Mahadevapura, Whi...	Vinod Bar And Restaurant	No	No	NaN	0	+91 8197675843	Whitefield	Bar	NaN
51714	https://www.zomato.com/bangalore/plunge-sherat...	Sheraton Grand Bengaluru Whitefield Hotel & Co...	Plunge - Sheraton Grand Bengaluru Whitefield H...	No	No	NaN	0	NaN	Whitefield	Bar	NaN
51715	https://www.zomato.com/bangalore/chime-sherato...	Sheraton Grand Bengaluru Whitefield Hotel & Co...	Chime - Sheraton Grand Bengaluru Whitefield Ho...	No	Yes	4.3 /5	236	080 49652769	ITPL Main Road, Whitefield	Bar	Cocktails, Pizza, Buttermilk
51716	https://www.zomato.com/bangalore/the-nest-the-...	ITPL Main Road, KIADB Export Promotion Industr...	The Nest - The Den Bengaluru	No	No	3.4 /5	13	+91 8071117272	ITPL Main Road, Whitefield	Bar, Casual Dining	NaN

df.isnull().sum()

```
url                                0
address                            0
name                               0
online_order                       0
book_table                         0
rate                            7775
votes                              0
phone                           1208
location                          21
rest_type                        227
dish_liked                     28078
cuisines                          45
approx_cost(for two people)      346
reviews_list                       0
menu_item                          0
listed_in(type)                    0
listed_in(city)                    0
dtype: int64
```

df['name'].unique()

```
array(['Jalsa', 'Spice Elephant', 'San Churro Cafe', ..., 'Nawabs Empire',
       'SeeYa Restaurant',
       'Plunge - Sheraton Grand Bengaluru Whitefield Hotel &...'],
      dtype=object)
```

df.rate.unique()

```
array(['4.1/5', '3.8/5', '3.7/5', '3.6/5', '4.6/5', '4.0/5', '4.2/5',
       '3.9/5', '3.1/5', '3.0/5', '3.2/5', '3.3/5', '2.8/5', '4.4/5',
       '4.3/5', 'NEW', '2.9/5', '3.5/5', nan, '2.6/5', '3.8 /5', '3.4/5',
       '4.5/5', '2.5/5', '2.7/5', '4.7/5', '2.4/5', '2.2/5', '2.3/5',
       '3.4 /5', '-', '3.6 /5', '4.8/5', '3.9 /5', '4.2 /5', '4.0 /5',
       '4.1 /5', '3.7 /5', '3.1 /5', '2.9 /5', '3.3 /5', '2.8 /5',
       '3.5 /5', '2.7 /5', '2.5 /5', '3.2 /5', '2.6 /5', '4.5 /5',
       '4.3 /5', '4.4 /5', '4.9/5', '2.1/5', '2.0/5', '1.8/5', '4.6 /5',
       '4.9 /5', '3.0 /5', '4.8 /5', '2.3 /5', '4.7 /5', '2.4 /5',
       '2.1 /5', '2.2 /5', '2.0 /5', '1.8 /5'], dtype=object)
```

#deleting the unnecessary columns

#Dropping the columns 'url',dish_liked',phonenum and saving new dataset as zomato

zomato=df.drop(['url','dish_liked','phone'],axis=1)

zomato.info()

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 51717 entries, 0 to 51716
Data columns (total 14 columns):
 #   Column                       Non-Null Count  Dtype
---  ------                       --------------  -----
 0   address                      51717 non-null  object
 1   name                         51717 non-null  object
 2   online_order                 51717 non-null  object
 3   book_table                   51717 non-null  object
 4   rate                         43942 non-null  object
 5   votes                        51717 non-null  int64
 6   location                     51696 non-null  object
 7   rest_type                    51490 non-null  object
 8   cuisines                     51672 non-null  object
 9   approx_cost(for two people)  51371 non-null  object
 10  reviews_list                 51717 non-null  object
 11  menu_item                    51717 non-null  object
 12  listed_in(type)              51717 non-null  object
 13  listed_in(city)              51717 non-null  object
dtypes: int64(1), object(13)
memory usage: 5.5+ MB
```

#removing duplicates

zomato.drop_duplicates(inplace=True)

#remove the NaN values from the dataset

zomato.isnull().sum()

zomato.dropna(how='any',inplace=True)

zomato.info()

```
<class 'pandas.core.frame.DataFrame'>
Int64Index: 43499 entries, 0 to 51716
Data columns (total 14 columns):
 #   Column                       Non-Null Count  Dtype 
---  ------                       --------------  ----- 
 0   address                      43499 non-null  object
 1   name                         43499 non-null  object
 2   online_order                 43499 non-null  object
 3   book_table                   43499 non-null  object
 4   rate                         43499 non-null  object
 5   votes                        43499 non-null  int64 
 6   location                     43499 non-null  object
 7   rest_type                    43499 non-null  object
 8   cuisines                     43499 non-null  object
 9   approx_cost(for two people)  43499 non-null  object
 10  reviews_list                 43499 non-null  object
 11  menu_item                    43499 non-null  object
 12  listed_in(type)              43499 non-null  object
 13  listed_in(city)              43499 non-null  object
dtypes: int64(1), object(13)
memory usage: 5.0+ MB
```

zomato.columns

```
Index(['address', 'name', 'online_order', 'book_table', 'rate', 'votes',
       'location', 'rest_type', 'cuisines', 'approx_cost(for two people)',
       'reviews_list', 'menu_item', 'listed_in(type)', 'listed_in(city)'],
      dtype='object')
```

#change the columns name

zomato=zomato.rename(columns={'approx_cost(for two people)':'cost','listed_in(type)':'type','listed_in(city)':'city'})

zomato.head(2)

	address	name	online_order	book_table	rate	votes	location	rest_type	cuisines	cost	reviews_list	menu_item	type	city
0	942, 21st Main Road, 2nd Stage, Banashankari, ...	Jalsa	Yes	Yes	4.1/5	775	Banashankari	Casual Dining	North Indian, Mughlai, Chinese	800	[('Rated 4.0', 'RATED\n A beautiful place to ...	[]	Buffet	Banashankari
1	2nd Floor, 80 Feet Road, Near Big Bazaar, 6th ...	Spice Elephant	Yes	No	4.1/5	787	Banashankari	Casual Dining	Chinese, North Indian, Thai	800	[('Rated 4.0', 'RATED\n Had been here for din...	[]	Buffet	Banashankari

Some Transformations

zomato['cost'] = zomato['cost'].astype(str) #Changing the cost to string

zomato['cost'] = zomato['cost'].apply(lambda x: x.replace(',','')) #Using lambda function to replace ',' from cost

zomato['cost'] = zomato['cost'].astype(float) # Changing the cost to Float

zomato.info()

```
<class 'pandas.core.frame.DataFrame'>
Int64Index: 43499 entries, 0 to 51716
Data columns (total 14 columns):
 #   Column        Non-Null Count  Dtype  
---  ------        --------------  -----  
 0   address       43499 non-null  object 
 1   name          43499 non-null  object 
 2   online_order  43499 non-null  object 
 3   book_table    43499 non-null  object 
 4   rate          43499 non-null  object 
 5   votes         43499 non-null  int64  
 6   location      43499 non-null  object 
 7   rest_type     43499 non-null  object 
 8   cuisines      43499 non-null  object 
 9   cost          43499 non-null  float64
 10  reviews_list  43499 non-null  object 
 11  menu_item     43499 non-null  object 
 12  type          43499 non-null  object 
 13  city          43499 non-null  object 
dtypes: float64(1), int64(1), object(12)
memory usage: 5.0+ MB
```

Removing '/5' from Rates

```
zomato = zomato.loc[zomato.rate !='NEW']
zomato = zomato.loc[zomato.rate !='-'].reset_index(drop=True)
remove_slash = lambda x: x.replace('/5', '') if type(x) == np.str else x
zomato.rate = zomato.rate.apply(remove_slash).str.strip().astype('float')
zomato.rate.head()
```

```
0    4.1
1    4.1
2    3.8
3    3.7
4    3.8
Name: rate, dtype: float64
```

Adjust the column values for online order and book table

```
#zomato.name = zomato.name.apply(lambda x:x.title())
#zomato.online_order.replace(('Yes','No'),(True, False),inplace=True)
#zomato.book_table.replace(('Yes','No'),(True, False),inplace=True)
zomato.cost.unique()
```

```
array([ 800.,  300.,  600.,  700.,  550.,  500.,  450.,  650.,  400.,
        900.,  200.,  750.,  150.,  850.,  100., 1200.,  350.,  250.,
        950., 1000., 1500., 1300.,  199., 1100., 1600.,  230.,  130.,
       1700., 1350., 2200., 1400., 2000., 1800., 1900.,  180.,  330.,
       2500., 2100., 3000., 2800., 3400.,   50.,   40., 1250., 3500.,
       4000., 2400., 2600., 1450.,   70., 3200.,  240., 6000., 1050.,
       2300., 4100.,  120., 5000., 3700., 1650., 2700., 4500.,   80.])
```

zomato.isnull().sum()

```
address         0
name            0
online_order    0
book_table      0
rate            0
votes           0
location        0
rest_type       0
cuisines        0
cost            0
reviews_list    0
menu_item       0
type            0
city            0
dtype: int64
```

Computing Mean Rate

zomato['rate'].mean()

```
3.7020297305817453
```

#get correlation between different variables

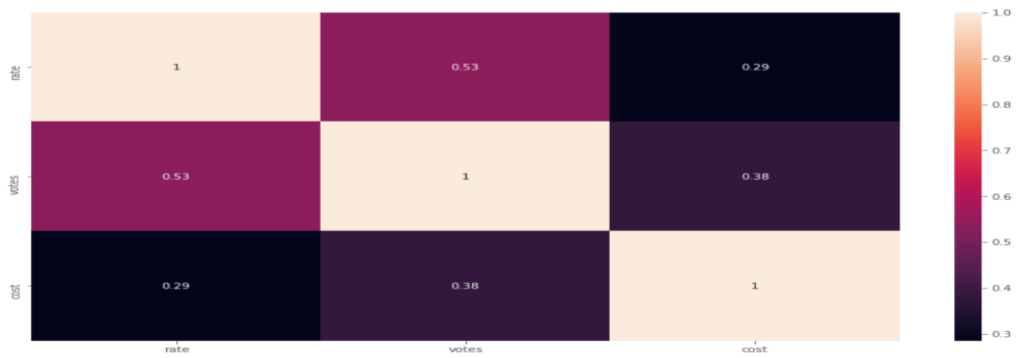
corr = zomato.corr(method='kendall')

plt.figure(figsize=(15,8))

sns.heatmap(corr,annot=True)

zomato.columns

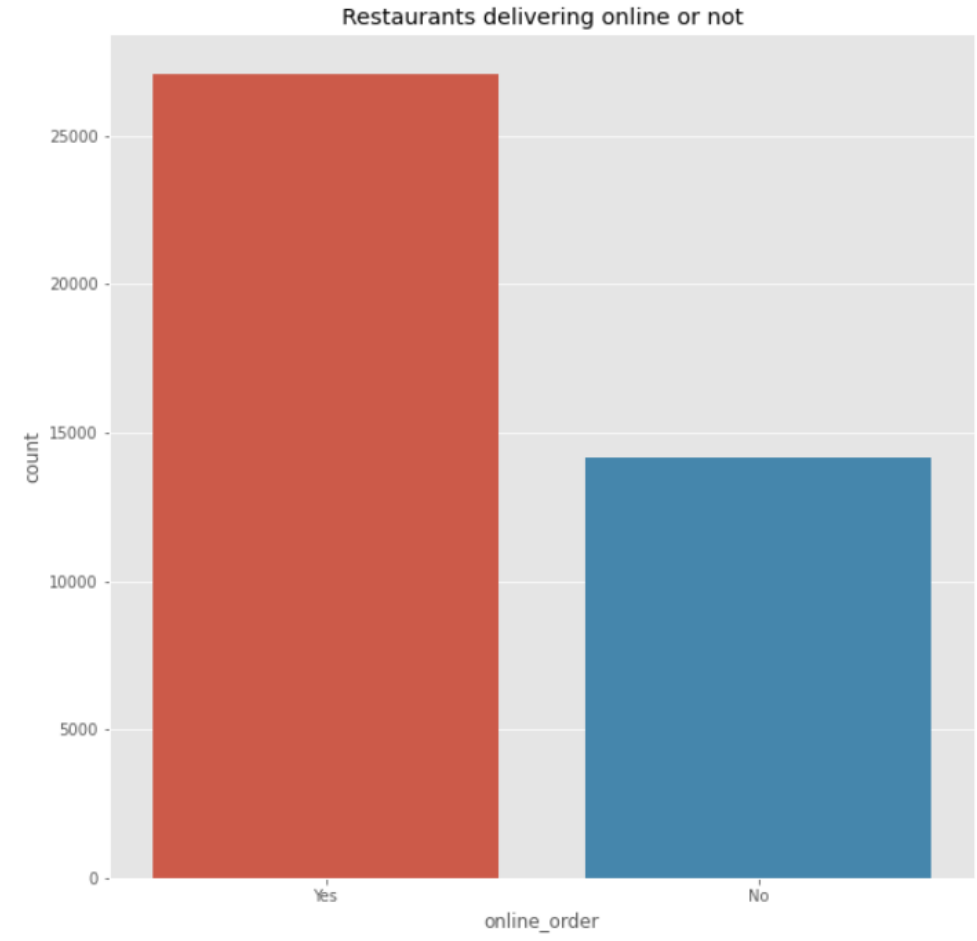
```
Index(['address', 'name', 'online_order', 'book_table', 'rate', 'votes',
       'location', 'rest_type', 'cuisines', 'cost', 'reviews_list',
       'menu_item', 'type', 'city'],
      dtype='object')
```



#Restaurants delivering online or not

```
sns.countplot(zomato['online_order'])
fig=plt.gcf()
fig.set_size_inches(10,10)
plt.title('Restaurants delivering online or not')
```

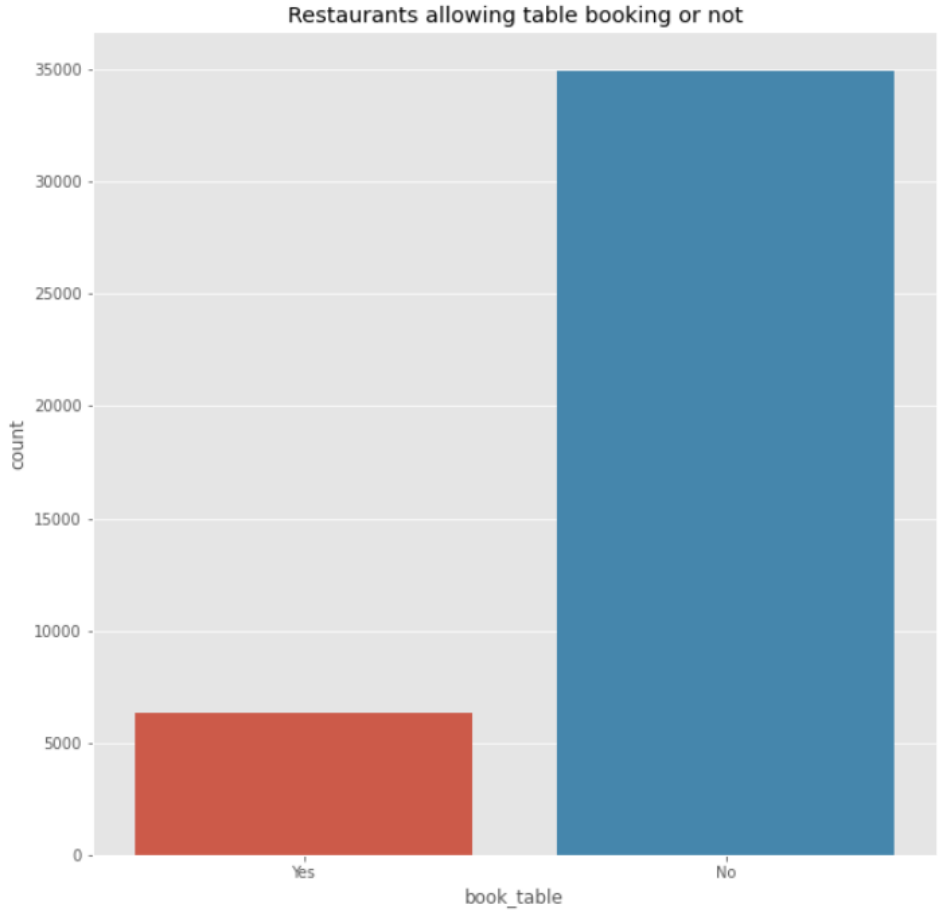
```
Text(0.5, 1.0, 'Restaurants delivering online or not')
```



#Restaurants allowing table booking or not

```
sns.countplot(zomato['book_table'])
fig=plt.gcf()
fig.set_size_inches(10,10)
plt.title('Restaurants allowing table booking or not')
```

```
Text(0.5, 1.0, 'Restaurants allowing table booking or not')
```



#table booking vs Rate

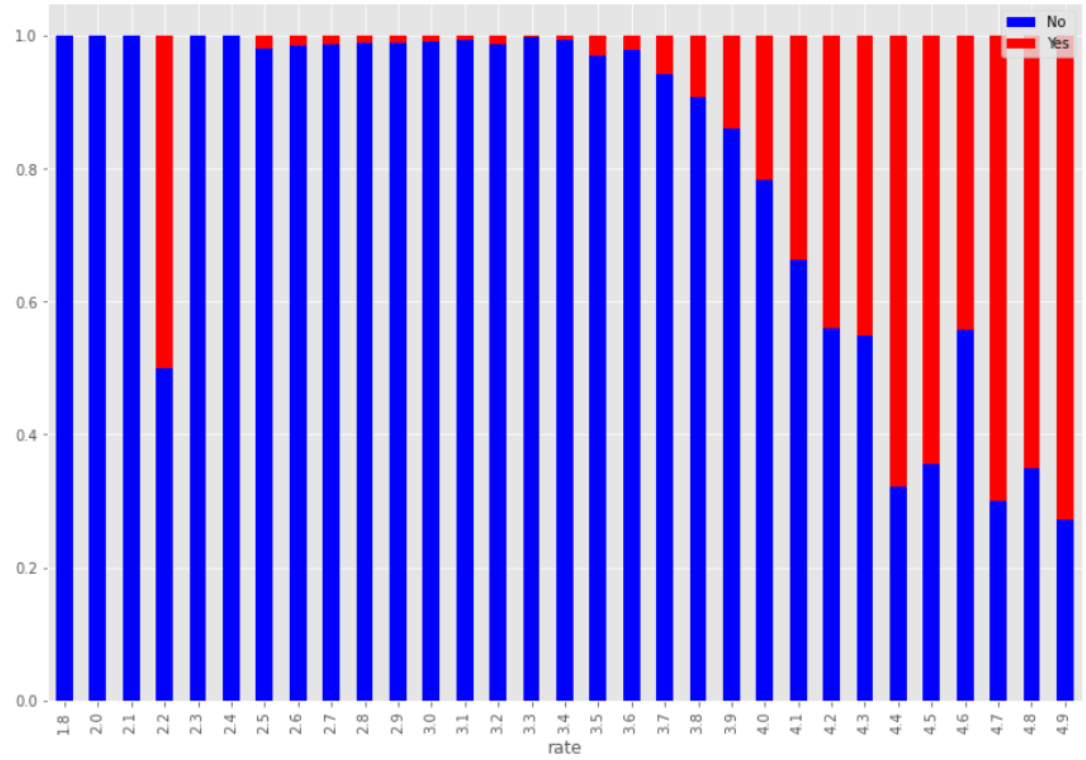
```
plt.rcParams['figure.figsize']=(13,9)

y = pd.crosstab(zomato['rate'],zomato['book_table'])

y.div(y.sum(1).astype(float),axis=0).plot(kind='bar',stacked=True,color=['blue','red'])

plt.legend(loc="upper right")

plt.show()
```



#location

sns.countplot(zomato['city'])

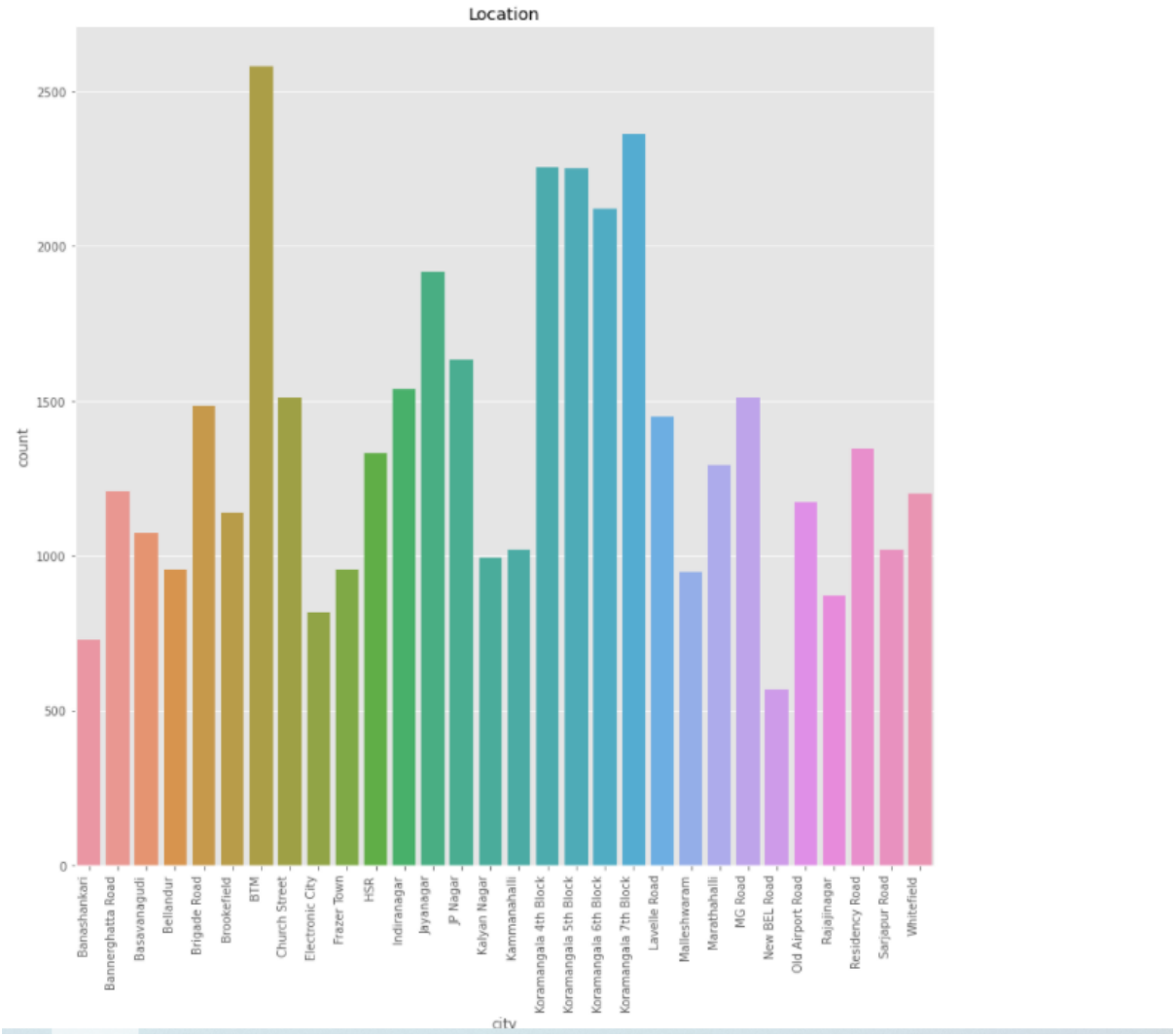
sns.countplot(zomato['city']).set_xticklabels(sns.countplot(zomato['city']).get_xticklabels(),rotation=90,ha='right')

fig=plt.gcf()

fig.set_size_inches(13,13)

plt.title('Location')

```
Text(0.5, 1.0, 'Location')
```



#rating and location

loc_plt=pd.crosstab(zomato['rate'],zomato['city'])

loc_plt.plot(kind='bar',stacked=True)

plt.title('Location - Rating',fontsize=15,fontweight='bold')

plt.ylabel('Location',fontsize=10,fontweight='bold')

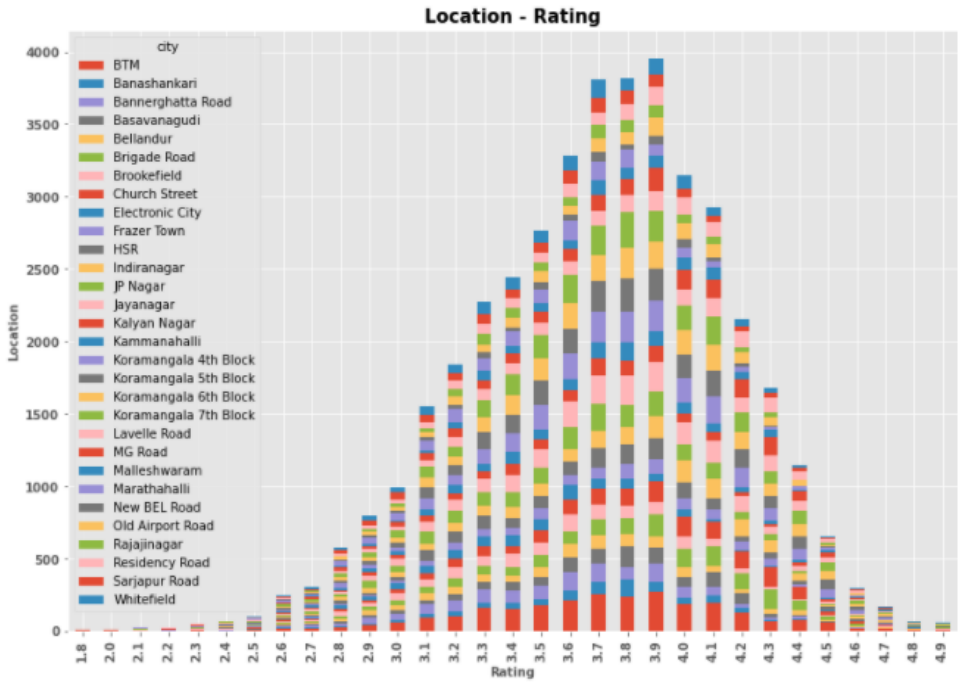
plt.xlabel('Rating',fontsize=10,fontweight='bold')

plt.xticks(fontsize=10,fontweight='bold')

plt.yticks(fontsize=10,fontweight='bold')

#plt.legend().remove();

```
(array([   0.,  500., 1000., 1500., 2000., 2500., 3000., 3500., 4000.,
        4500.]),
 <a list of 10 Text major ticklabel objects>)
```



#Restaurant Type

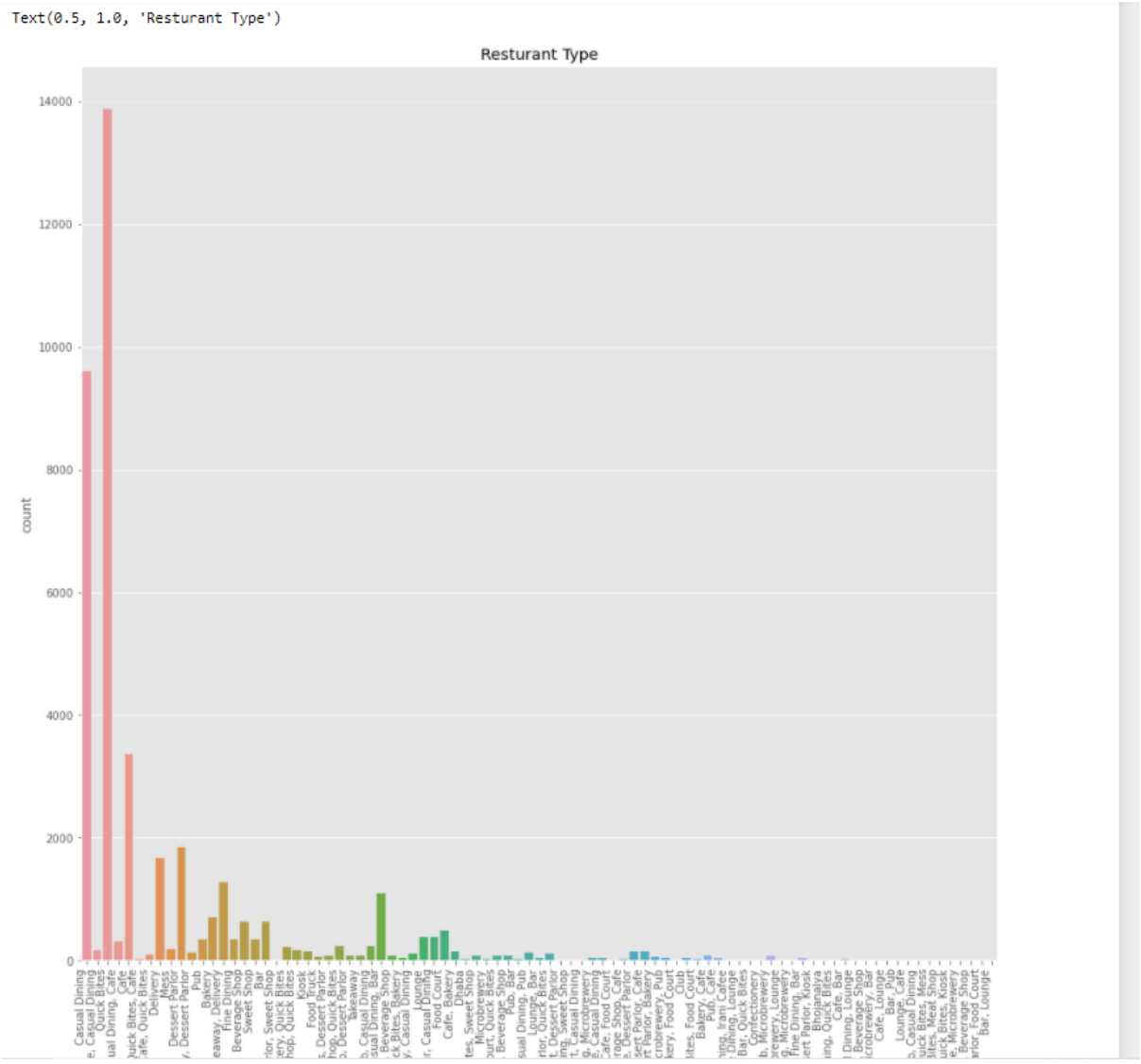
```
sns.countplot(zomato['rest_type'])
```

```
sns.countplot(zomato['rest_type']).set_xticklabels(sns.countplot(zomato['rest_type']).get_xticklabels(),rotation=90, ha="right")
```

```
fig=plt.gcf()
```

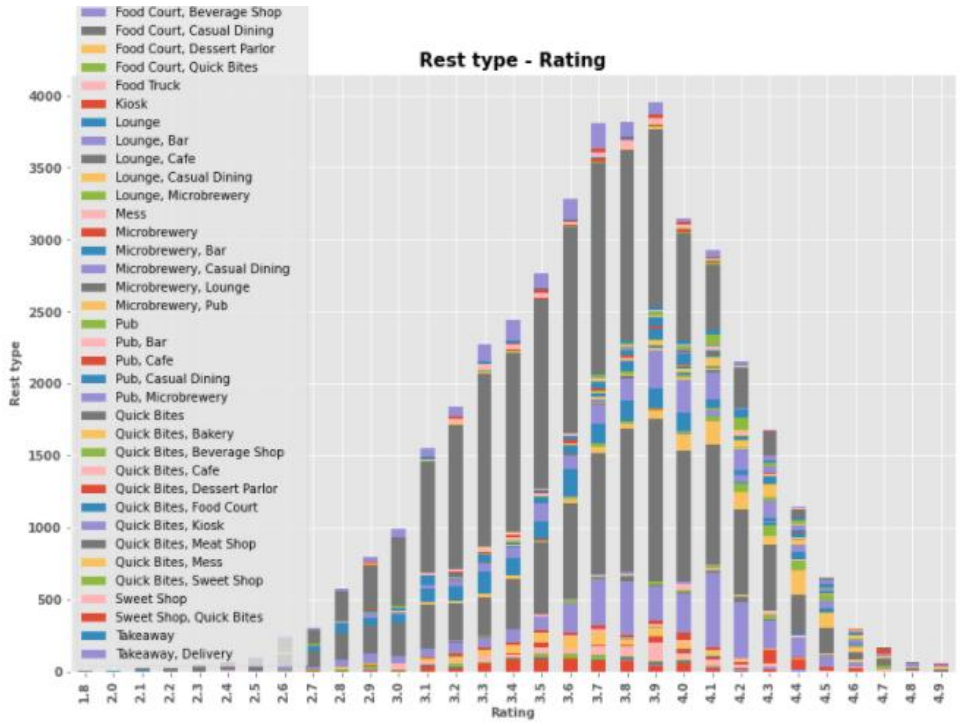
```
fig.set_size_inches(15,15)
```

```
plt.title('Resturant Type')
```



#Restaurants Type and rating

```
loc_plt=pd.crosstab(zomato['rate'],zomato['rest_type'])
loc_plt.plot(kind='bar',stacked=True)
plt.title('Rest type - Rating',fontsize=15,fontweight='bold')
plt.ylabel('Rest type',fontsize=10,fontweight='bold')
plt.xlabel('Rating',fontsize=10,fontweight='bold')
plt.xticks(fontsize=10,fontweight='bold')
plt.yticks(fontsize=10,fontweight='bold')
#plt.legend().remove();
```



#Types of services

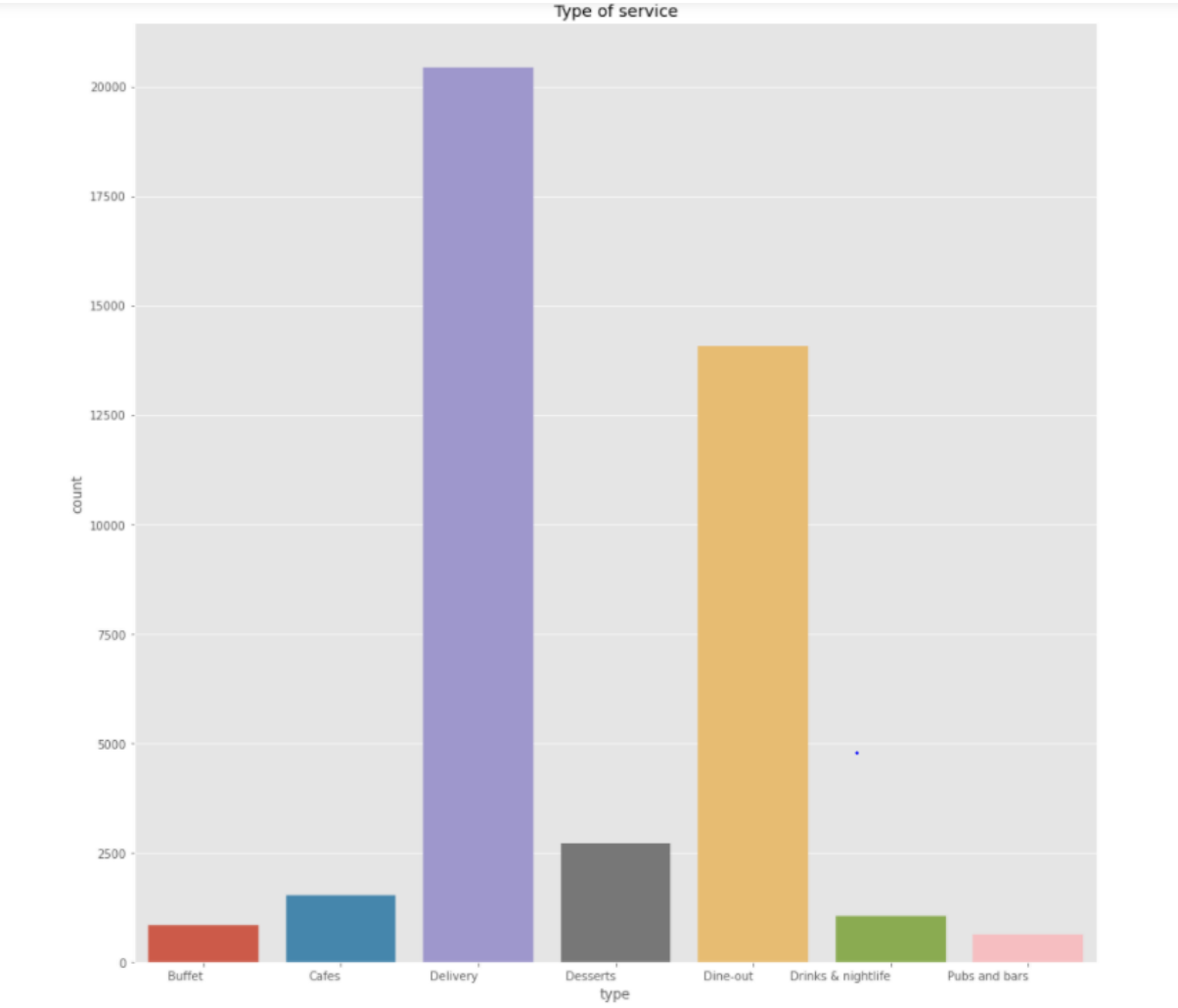
sns.countplot(zomato['type'])

sns.countplot(zomato['type']).set_xticklabels(sns.countplot(zomato['type']).get_xticklabels(),ha="right")

fig = plt.gcf()

fig.set_size_inches(15,15)

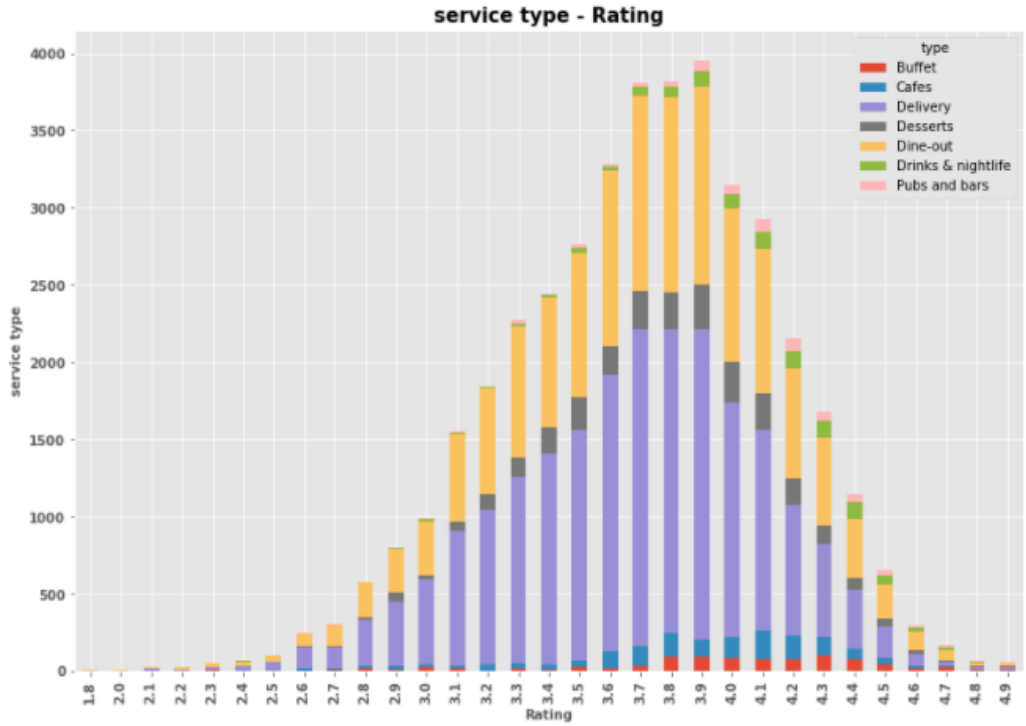
plt.title('Type of service')



#servic type and rating

```
loc_plt=pd.crosstab(zomato['rate'],zomato['type'])
loc_plt.plot(kind='bar',stacked=True)
plt.title('service type - Rating',fontsize=15,fontweight='bold')
plt.ylabel('service type',fontsize=10,fontweight='bold')
plt.xlabel('Rating',fontsize=10,fontweight='bold')
plt.xticks(fontsize=10,fontweight='bold')
plt.yticks(fontsize=10,fontweight='bold')
#plt.legend().remove();
```

```
(array([   0.,  500., 1000., 1500., 2000., 2500., 3000., 3500., 4000.,
        4500.]),
 <a list of 10 Text major ticklabel objects>)
```



#cost of Restaurants

sns.countplot(zomato['cost'])

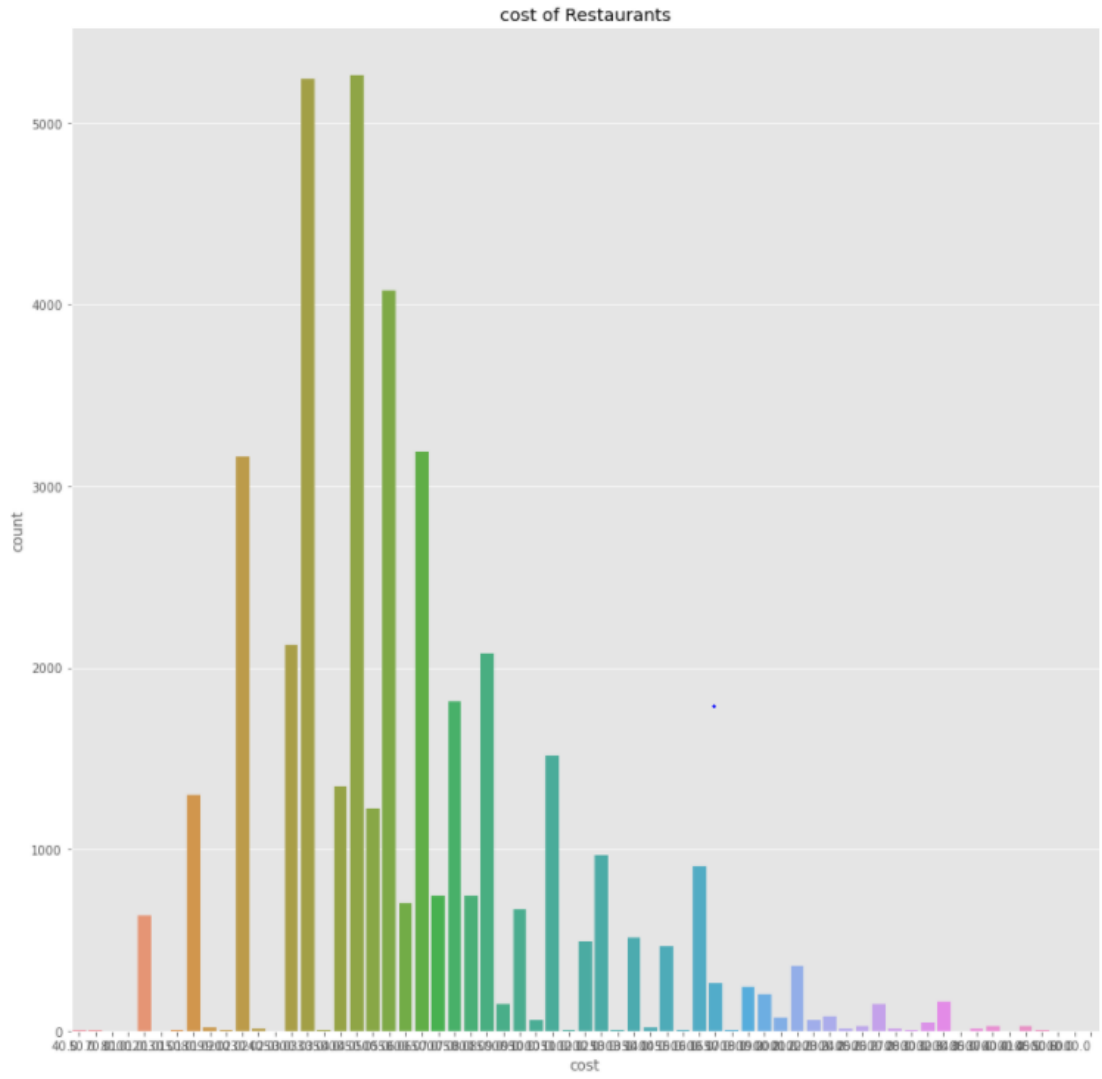
sns.countplot(zomato['cost']).set_xticklabels(sns.countplot(zomato['cost']).get_xticklabels(),ha="right")

fig = plt.gcf()

fig.set_size_inches(15,15)

plt.title('cost of Restaurants')

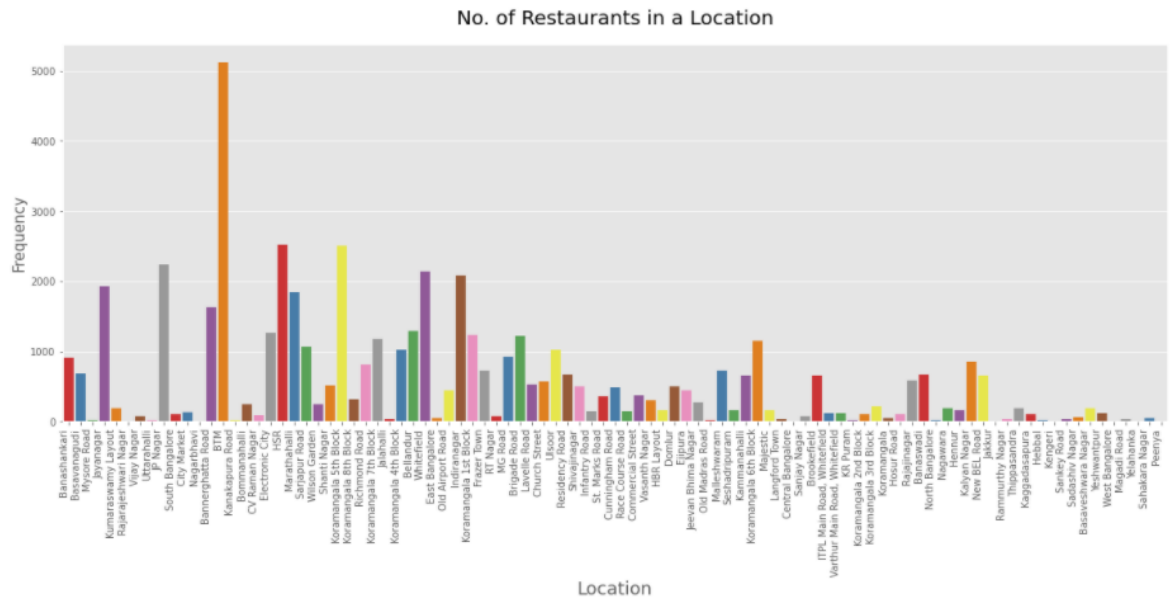
```
Text(0.5, 1.0, 'cost of Restaurants')
```



#No. of Restaurants in a Location

```
fig = plt.figure(figsize=(20,7))
loc = sns.countplot(x="location",data=df,palette="Set1")
loc.set_xticklabels(loc.get_xticklabels(),rotation=90,ha="right")
plt.ylabel("Frequency",size=15)
plt.xlabel("Location",size=18)
loc
plt.title('No. of Restaurants in a Location',size=20,pad=20)
```

```
Text(0.5, 1.0, 'No. of Restaurants in a Location')
```



#most famous Restaurant

df['name'].value_counts()[:20]

```
Cafe Coffee Day      96
Onesta               85
Just Bake            73
Empire Restaurant    71
Five Star Chicken    70
Kanti Sweets         68
Petoo                66
Polar Bear           65
Baskin Robbins       64
Chef Baker's         62
Pizza Hut            62
Sweet Truth          60
Domino's Pizza       60
KFC                  60
Subway               60
Beijing Bites        60
Smoor                59
McDonald's           59
Chai Point           58
Faasos               57
Name: name, dtype: int64
```

Conclusion

Here , I have came to the end of the project on ‘EDA ANALYSIS ON ZOMATO’ included all the necessary points that are required in the project .

I have completed successfully the project

REFRENCE

https://www.kaggle.com/himanshupoddar/zomato-bangalore-restaurants?select=zomato.csv

https://www.analyticsvidhya.com/blog/2020/08/exploratory-data-analysiseda-from-scratch-in-python/

PROJECT CODE LINK

https://github.com/Manoj123-github/DSAI/blob/main/EDA%20Analysis%20on%20Zomato%20.ipynb