

# zomato-dataset

June 25, 2024

## 1 Zomato EDA

```
[1]: # Importing the Libraries
```

```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
%matplotlib inline
```

```
[2]: # Reading the dataset
```

```
df= pd.read_csv('zomato.csv', encoding='latin-1')
```

```
[3]: # TO check for the top 5 rows
```

```
df.head()
```

```
[3]:
```

	Restaurant ID	Restaurant Name	Country Code	City \
0	6317637	Le Petit Souffle	162	Makati City
1	6304287	Izakaya Kikufuji	162	Makati City
2	6300002	Heat - Edsa Shangri-La	162	Mandaluyong City
3	6318506	Ooma	162	Mandaluyong City
4	6314302	Sambo Kojin	162	Mandaluyong City

```
Address \
```

0	Third Floor, Century City Mall, Kalayaan Avenu...
1	Little Tokyo, 2277 Chino Roces Avenue, Legaspi...
2	Edsa Shangri-La, 1 Garden Way, Ortigas, Mandal...
3	Third Floor, Mega Fashion Hall, SM Megamall, O...
4	Third Floor, Mega Atrium, SM Megamall, Ortigas...

```
Locality \
```

0	Century City Mall, Poblacion, Makati City
1	Little Tokyo, Legaspi Village, Makati City
2	Edsa Shangri-La, Ortigas, Mandaluyong City
3	SM Megamall, Ortigas, Mandaluyong City

4 SM Megamall, Ortigas, Mandaluyong City

	Locality Verbose	Longitude	Latitude	\
0	Century City Mall, Poblacion, Makati City, Mak...	121.027535	14.565443	
1	Little Tokyo, Legaspi Village, Makati City, Ma...	121.014101	14.553708	
2	Edsa Shangri-La, Ortigas, Mandaluyong City, Ma...	121.056831	14.581404	
3	SM Megamall, Ortigas, Mandaluyong City, Mandal...	121.056475	14.585318	
4	SM Megamall, Ortigas, Mandaluyong City, Mandal...	121.057508	14.584450	

	Cuisines	...	Currency	Has Table booking	\
0	French, Japanese, Desserts	...	Botswana Pula(P)	Yes	
1	Japanese	...	Botswana Pula(P)	Yes	
2	Seafood, Asian, Filipino, Indian	...	Botswana Pula(P)	Yes	
3	Japanese, Sushi	...	Botswana Pula(P)	No	
4	Japanese, Korean	...	Botswana Pula(P)	Yes	

	Has Online delivery	Is delivering now	Switch to order menu	Price range	\
0	No	No	No	3	
1	No	No	No	3	
2	No	No	No	4	
3	No	No	No	4	
4	No	No	No	4	

	Aggregate rating	Rating color	Rating text	Votes
0	4.8	Dark Green	Excellent	314
1	4.5	Dark Green	Excellent	591
2	4.4	Green	Very Good	270
3	4.9	Dark Green	Excellent	365
4	4.8	Dark Green	Excellent	229

[5 rows x 21 columns]

```
[4]: # Looking for the columns names
df.columns
```

```
[4]: Index(['Restaurant ID', 'Restaurant Name', 'Country Code', 'City', 'Address',
          'Locality', 'Locality Verbose', 'Longitude', 'Latitude', 'Cuisines',
          'Average Cost for two', 'Currency', 'Has Table booking',
          'Has Online delivery', 'Is delivering now', 'Switch to order menu',
          'Price range', 'Aggregate rating', 'Rating color', 'Rating text',
          'Votes'],
          dtype='object')
```

```
[8]: # Getting the Information about the data
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
```

RangeIndex: 9551 entries, 0 to 9550

Data columns (total 21 columns):

#	Column	Non-Null Count	Dtype
0	Restaurant ID	9551 non-null	int64
1	Restaurant Name	9551 non-null	object
2	Country Code	9551 non-null	int64
3	City	9551 non-null	object
4	Address	9551 non-null	object
5	Locality	9551 non-null	object
6	Locality Verbose	9551 non-null	object
7	Longitude	9551 non-null	float64
8	Latitude	9551 non-null	float64
9	Cuisines	9542 non-null	object
10	Average Cost for two	9551 non-null	int64
11	Currency	9551 non-null	object
12	Has Table booking	9551 non-null	object
13	Has Online delivery	9551 non-null	object
14	Is delivering now	9551 non-null	object
15	Switch to order menu	9551 non-null	object
16	Price range	9551 non-null	int64
17	Aggregate rating	9551 non-null	float64
18	Rating color	9551 non-null	object
19	Rating text	9551 non-null	object
20	Votes	9551 non-null	int64

dtypes: float64(3), int64(5), object(13)

memory usage: 1.5+ MB

```
[5]: # Summary Stastics
      # five number summary

df.describe()
```

```
[5]:
```

	Restaurant ID	Country Code	Longitude	Latitude	\
count	9.551000e+03	9551.000000	9551.000000	9551.000000	
mean	9.051128e+06	18.365616	64.126574	25.854381	
std	8.791521e+06	56.750546	41.467058	11.007935	
min	5.300000e+01	1.000000	-157.948486	-41.330428	
25%	3.019625e+05	1.000000	77.081343	28.478713	
50%	6.004089e+06	1.000000	77.191964	28.570469	
75%	1.835229e+07	1.000000	77.282006	28.642758	
max	1.850065e+07	216.000000	174.832089	55.976980	

	Average Cost for two	Price range	Aggregate rating	Votes
count	9551.000000	9551.000000	9551.000000	9551.000000
mean	1199.210763	1.804837	2.666370	156.909748
std	16121.183073	0.905609	1.516378	430.169145

min	0.000000	1.000000	0.000000	0.000000
25%	250.000000	1.000000	2.500000	5.000000
50%	400.000000	2.000000	3.200000	31.000000
75%	700.000000	2.000000	3.700000	131.000000
max	800000.000000	4.000000	4.900000	10934.000000

## 1.1 Process of Data Analysis

1. Missing values
2. Explore about the numerical variables
3. Explore about caregorical variables
4. Finding relationship between features

## 2 1. Missing values

```
[6]: # To check for the number of rows and columns (Shape)
df.shape
```

```
[6]: (9551, 21)
```

```
[7]: # to find the missing values
df.isnull().sum()
```

```
[7]: Restaurant ID      0
Restaurant Name      0
Country Code        0
City                0
Address             0
Locality            0
Locality Verbose    0
Longitude           0
Latitude            0
Cuisines            9
Average Cost for two 0
Currency            0
Has Table booking   0
Has Online delivery 0
Is delivering now   0
Switch to order menu 0
Price range         0
Aggregate rating    0
Rating color        0
Rating text         0
Votes              0
dtype: int64
```

```
[8]: # To check the features/columns which have null values

[features for features in df.columns if df[features].isnull().sum() > 0]
```

```
[8]: ['Cuisines']
```

```
[10]: # Reading the Second file related to the Fact_Data

df_country = pd.read_excel("Country-Code.xlsx")

df_country.head()
```

```
[10]:   Country Code   Country
0           1      India
1          14  Australia
2          30    Brazil
3          37    Canada
4          94  Indonesia
```

```
[21]: # Checking for Columns names

df.columns
```

```
[21]: Index(['Restaurant ID', 'Restaurant Name', 'Country Code', 'City', 'Address',
        'Locality', 'Locality Verbose', 'Longitude', 'Latitude', 'Cuisines',
        'Average Cost for two', 'Currency', 'Has Table booking',
        'Has Online delivery', 'Is delivering now', 'Switch to order menu',
        'Price range', 'Aggregate rating', 'Rating color', 'Rating text',
        'Votes'],
        dtype='object')
```

```
[11]: # Combine the both dataset based on the 'country code'

final_df = pd.merge(df, df_country, on='Country Code', how='left')
```

```
[12]: # Combined dataset with both table's data

final_df.head()
```

```
[12]:   Restaurant ID   Restaurant Name   Country Code   City \
0      6317637      Le Petit Souffle      162      Makati City
1      6304287      Izakaya Kikufuji      162      Makati City
2      6300002  Heat - Edsa Shangri-La      162  Mandaluyong City
3      6318506                      Ooma      162  Mandaluyong City
4      6314302      Sambo Kojin      162  Mandaluyong City

                                     Address \
```

```

0 Third Floor, Century City Mall, Kalayaan Avenu...
1 Little Tokyo, 2277 Chino Roces Avenue, Legaspi...
2 Edsa Shangri-La, 1 Garden Way, Ortigas, Mandal...
3 Third Floor, Mega Fashion Hall, SM Megamall, O...
4 Third Floor, Mega Atrium, SM Megamall, Ortigas...

```

```

                                Locality \
0 Century City Mall, Poblacion, Makati City
1 Little Tokyo, Legaspi Village, Makati City
2 Edsa Shangri-La, Ortigas, Mandaluyong City
3 SM Megamall, Ortigas, Mandaluyong City
4 SM Megamall, Ortigas, Mandaluyong City

```

```

                                Locality Verbose Longitude Latitude \
0 Century City Mall, Poblacion, Makati City, Mak... 121.027535 14.565443
1 Little Tokyo, Legaspi Village, Makati City, Ma... 121.014101 14.553708
2 Edsa Shangri-La, Ortigas, Mandaluyong City, Ma... 121.056831 14.581404
3 SM Megamall, Ortigas, Mandaluyong City, Mandal... 121.056475 14.585318
4 SM Megamall, Ortigas, Mandaluyong City, Mandal... 121.057508 14.584450

```

```

                                Cuisines ... Has Table booking \
0 French, Japanese, Desserts ... Yes
1 Japanese ... Yes
2 Seafood, Asian, Filipino, Indian ... Yes
3 Japanese, Sushi ... No
4 Japanese, Korean ... Yes

```

```

Has Online delivery Is delivering now Switch to order menu Price range \
0 No No No 3
1 No No No 3
2 No No No 4
3 No No No 4
4 No No No 4

```

```

Aggregate rating Rating color Rating text Votes Country
0 4.8 Dark Green Excellent 314 Phillipines
1 4.5 Dark Green Excellent 591 Phillipines
2 4.4 Green Very Good 270 Phillipines
3 4.9 Dark Green Excellent 365 Phillipines
4 4.8 Dark Green Excellent 229 Phillipines

```

[5 rows x 22 columns]

[13]: *## TO check the data types*

```
final_df.dtypes
```

```
[13]: Restaurant ID          int64
      Restaurant Name       object
      Country Code         int64
      City                 object
      Address              object
      Locality             object
      Locality Verbose     object
      Longitude            float64
      Latitude             float64
      Cuisines              object
      Average Cost for two  int64
      Currency             object
      Has Table booking     object
      Has Online delivery   object
      Is delivering now     object
      Switch to order menu  object
      Price range          int64
      Aggregate rating      float64
      Rating color          object
      Rating text           object
      Votes                int64
      Country              object
      dtype: object
```

```
[14]: final_df.columns
```

```
[14]: Index(['Restaurant ID', 'Restaurant Name', 'Country Code', 'City', 'Address',
          'Locality', 'Locality Verbose', 'Longitude', 'Latitude', 'Cuisines',
          'Average Cost for two', 'Currency', 'Has Table booking',
          'Has Online delivery', 'Is delivering now', 'Switch to order menu',
          'Price range', 'Aggregate rating', 'Rating color', 'Rating text',
          'Votes', 'Country'],
          dtype='object')
```

```
[16]: # Extracing the country names
      country_names = final_df.Country.value_counts().index
      country_names
```

```
[16]: Index(['India', 'United States', 'United Kingdom', 'Brazil', 'UAE',
          'South Africa', 'New Zealand', 'Turkey', 'Australia', 'Phillipines',
          'Indonesia', 'Singapore', 'Qatar', 'Sri Lanka', 'Canada'],
          dtype='object', name='Country')
```

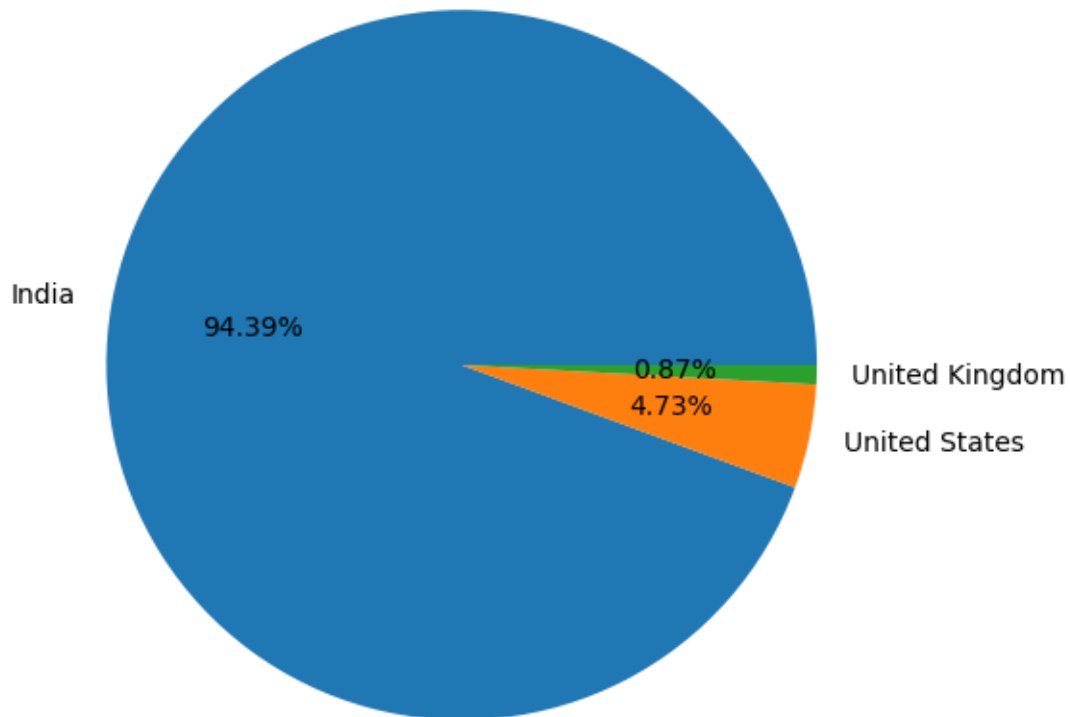
```
[17]: country_values = final_df.Country.value_counts().values
      country_values
```

```
[17]: array([8652, 434, 80, 60, 60, 60, 40, 34, 24, 22, 21,
          20, 20, 20, 4], dtype=int64)
```

```
[19]: ## Pie chart - top 3 countries
```

```
plt.pie(country_values[:3], labels=country_names[:3], autopct='%1.2f%%' )
```

```
[19]: ([<matplotlib.patches.Wedge at 0x23faab862d0>,
      <matplotlib.patches.Wedge at 0x23faab87dd0>,
      <matplotlib.patches.Wedge at 0x23faabc2c50>],
      [Text(-1.0829742700952103, 0.19278674827836725, 'India'),
       Text(1.077281715838356, -0.22240527134123297, 'United States'),
       Text(1.0995865153823035, -0.03015783794312073, 'United Kingdom')],
      [Text(-0.590713238233751, 0.10515640815183668, '94.39%'),
       Text(0.5876082086391032, -0.12131196618612707, '4.73%'),
       Text(0.5997744629358018, -0.01644972978715676, '0.87%')])
```



Obsevation : Most the Zomato business is based in India after that USA and UK



```
[20]: final_df.columns
```

```
[20]: Index(['Restaurant ID', 'Restaurant Name', 'Country Code', 'City', 'Address',  
         'Locality', 'Locality Verbose', 'Longitude', 'Latitude', 'Cuisines',  
         'Average Cost for two', 'Currency', 'Has Table booking',  
         'Has Online delivery', 'Is delivering now', 'Switch to order menu',  
         'Price range', 'Aggregate rating', 'Rating color', 'Rating text',  
         'Votes', 'Country'],  
        dtype='object')
```

```
[21]: # Exploring the ratings  
ratings = final_df.groupby(['Aggregate rating', 'Rating color', 'Rating text']).  
        size().reset_index().rename(columns={0: 'Rating Count'})
```

```
[22]: ratings
```

```
[22]:
```

	Aggregate rating	Rating color	Rating text	Rating Count
0	0.0	White	Not rated	2148
1	1.8	Red	Poor	1
2	1.9	Red	Poor	2
3	2.0	Red	Poor	7
4	2.1	Red	Poor	15
5	2.2	Red	Poor	27
6	2.3	Red	Poor	47
7	2.4	Red	Poor	87
8	2.5	Orange	Average	110
9	2.6	Orange	Average	191
10	2.7	Orange	Average	250
11	2.8	Orange	Average	315
12	2.9	Orange	Average	381
13	3.0	Orange	Average	468
14	3.1	Orange	Average	519
15	3.2	Orange	Average	522
16	3.3	Orange	Average	483
17	3.4	Orange	Average	498
18	3.5	Yellow	Good	480
19	3.6	Yellow	Good	458
20	3.7	Yellow	Good	427
21	3.8	Yellow	Good	400
22	3.9	Yellow	Good	335
23	4.0	Green	Very Good	266
24	4.1	Green	Very Good	274
25	4.2	Green	Very Good	221
26	4.3	Green	Very Good	174
27	4.4	Green	Very Good	144
28	4.5	Dark Green	Excellent	95
29	4.6	Dark Green	Excellent	78

30	4.7	Dark Green	Excellent	42
31	4.8	Dark Green	Excellent	25
32	4.9	Dark Green	Excellent	61

## 2.1 Observations

1. When rating is between 4.5-4.9 —> Excellent
2. When rating is between 4.0-4.4 —> Very Good
3. When rating is between 3.5-3.9 —> Good
4. When rating is between 3.0-3.4 —> Average
5. When rating is between 2.5-2.9 —> Average
6. When rating is between 2.0-2.4 —> Poor

```
[23]: # Top 5 ratings data
```

```
ratings.head()
```

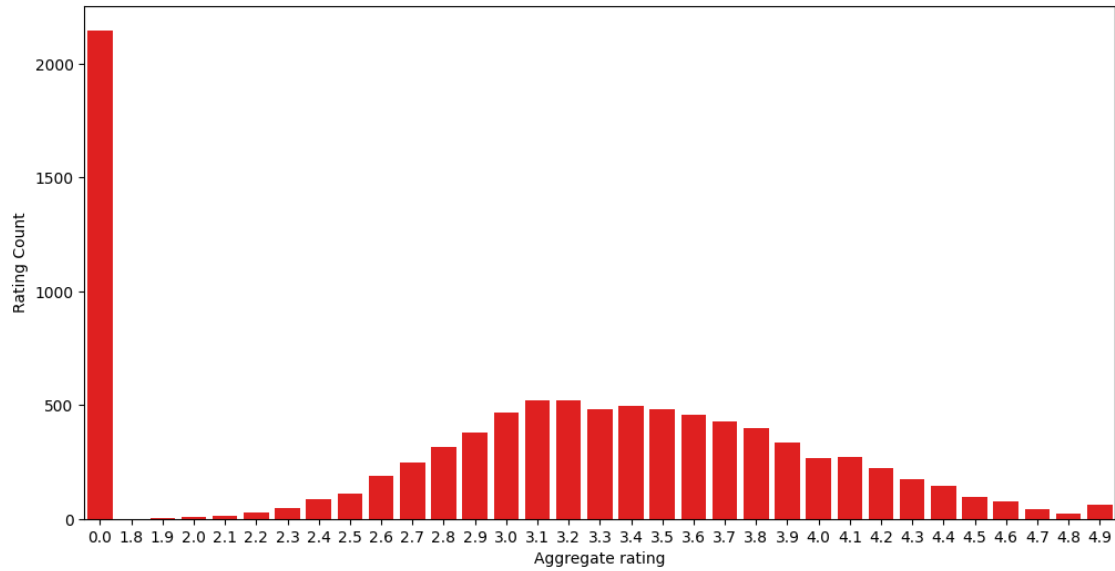
```
[23]:
```

	Aggregate rating	Rating	color	Rating text	Rating Count
0	0.0	White	Not rated		2148
1	1.8	Red	Poor		1
2	1.9	Red	Poor		2
3	2.0	Red	Poor		7
4	2.1	Red	Poor		15

```
[26]: # plotting the ratings data by barplot
```

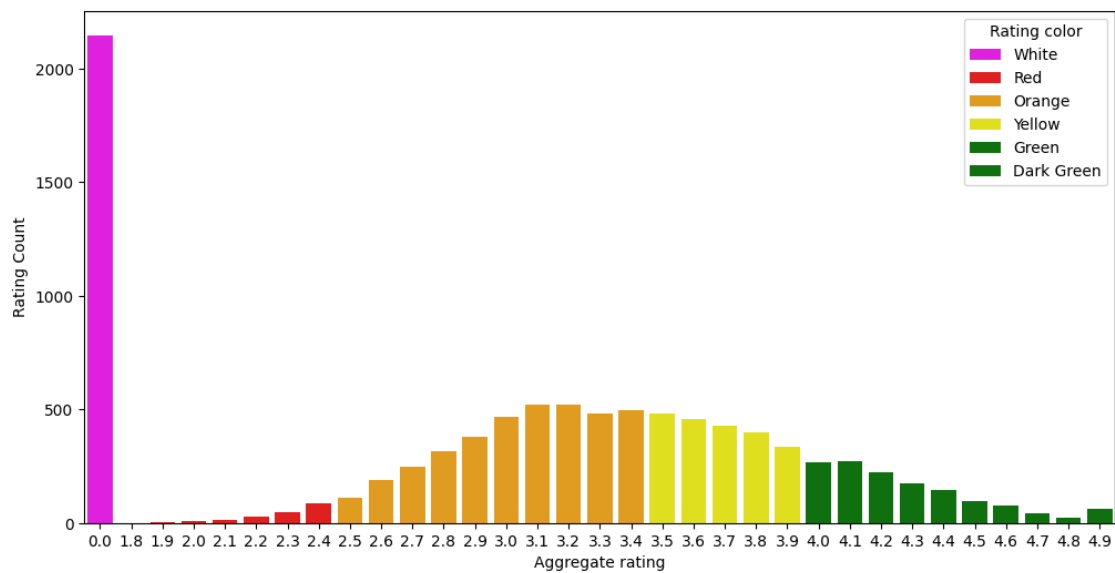
```
import matplotlib
matplotlib.rcParams['figure.figsize'] = (12, 6)
sns.barplot(x = 'Aggregate rating', y = 'Rating Count', data=ratings, color='r')
```

```
[26]: <Axes: xlabel='Aggregate rating', ylabel='Rating Count'>
```



```
[27]: sns.barplot(x = 'Aggregate rating', y = 'Rating Count', data=ratings,
    ↳ hue='Rating color', palette=['magenta', 'red', 'orange', 'yellow', 'green',
    ↳ 'green'])
```

```
[27]: <Axes: xlabel='Aggregate rating', ylabel='Rating Count'>
```



Observations: 1. Most of the customers didn't rated and count is very high 2. Max number of ratings are between 2.5 to 3.4

```
[28]: # Count plot
```

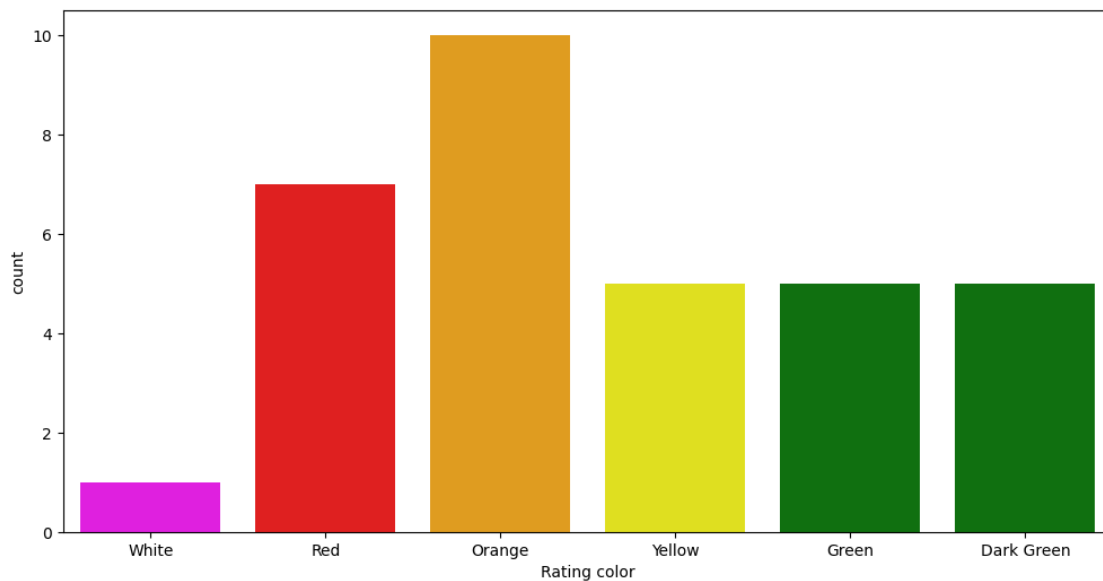
```
sns.countplot(x = 'Rating color' ,data = ratings, palette=['magenta', 'red', 'orange', 'yellow', 'green', 'green'])
```

C:\Users\malvi\AppData\Local\Temp\ipykernel\_23816\335838701.py:3: FutureWarning:

Passing `palette` without assigning `hue` is deprecated and will be removed in v0.14.0. Assign the `x` variable to `hue` and set `legend=False` for the same effect.

```
sns.countplot(x = 'Rating color' ,data = ratings, palette=['magenta', 'red', 'orange', 'yellow', 'green', 'green'])
```

```
[28]: <Axes: xlabel='Rating color', ylabel='count'>
```



```
[81]: # Countries name that has given 0 rating
```

```
final_df[final_df['Aggregate rating'] == 0].Country.value_counts().reset_index()
```

```
[81]:
```

	Country	count
0	India	2139
1	Brazil	5
2	United States	3
3	United Kingdom	1

Observation: Maximum number of 0 ratings are from Indian customers

```
[29]: # Looking for the country and their currency
```

```
final_df[['Country', 'Currency']].groupby(['Country', 'Currency']).size().
    ↪reset_index()
```

```
[29]:
```

	Country	Currency	0
0	Australia	Dollar(\$)	24
1	Brazil	Brazilian Real(R\$)	60
2	Canada	Dollar(\$)	4
3	India	Indian Rupees(Rs.)	8652
4	Indonesia	Indonesian Rupiah(IDR)	21
5	New Zealand	NewZealand(\$)	40
6	Phillipines	Botswana Pula(P)	22
7	Qatar	Qatari Rial(QR)	20
8	Singapore	Dollar(\$)	20
9	South Africa	Rand(R)	60
10	Sri Lanka	Sri Lankan Rupee(LKR)	20
11	Turkey	Turkish Lira(TL)	34
12	UAE	Emirati Diram(AED)	60
13	United Kingdom	Pounds(£)	80
14	United States	Dollar(\$)	434

```
[30]: # Which countries has online delivery
```

```
final_df[final_df['Has Online delivery'] == 'Yes'].Country.value_counts()
```

```
[30]: Country
India    2423
UAE       28
Name: count, dtype: int64
```

Observation : 1. Online deliveries are available in India and UAE

```
[118]: final_df.head()
```

```
[118]:
```

	Restaurant ID	Restaurant Name	Country Code	City \
0	6317637	Le Petit Souffle	162	Makati City
1	6304287	Izakaya Kikufuji	162	Makati City
2	6300002	Heat - Edsa Shangri-La	162	Mandaluyong City
3	6318506	Ooma	162	Mandaluyong City
4	6314302	Sambo Kojin	162	Mandaluyong City

	Address \
0	Third Floor, Century City Mall, Kalayaan Avenu...
1	Little Tokyo, 2277 Chino Roces Avenue, Legaspi...
2	Edsa Shangri-La, 1 Garden Way, Ortigas, Mandal...
3	Third Floor, Mega Fashion Hall, SM Megamall, O...
4	Third Floor, Mega Atrium, SM Megamall, Ortigas...

	Locality \
0	Century City Mall, Poblacion, Makati City
1	Little Tokyo, Legaspi Village, Makati City
2	Edsa Shangri-La, Ortigas, Mandaluyong City
3	SM Megamall, Ortigas, Mandaluyong City
4	SM Megamall, Ortigas, Mandaluyong City

	Locality Verbose	Longitude	Latitude \
0	Century City Mall, Poblacion, Makati City, Mak...	121.027535	14.565443
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4	SM Megamall, Ortigas, Mandaluyong City, Mandal...	121.057508	14.584450

	Cuisines ...	Has Table booking \
0	French, Japanese, Desserts ...	Yes
1	Japanese ...	Yes
2	Seafood, Asian, Filipino, Indian ...	Yes
3	Japanese, Sushi ...	No
4	Japanese, Korean ...	Yes

	Has Online delivery	Is delivering now	Switch to order menu	Price range \
0	No	No	No	3
1	No	No	No	3
2	No	No	No	4
3	No	No	No	4
4	No	No	No	4

	Aggregate rating	Rating color	Rating text	Votes	Country
0	4.8	Dark Green	Excellent	314	Phillipines
1	4.5	Dark Green	Excellent	591	Phillipines
2	4.4	Green	Very Good	270	Phillipines
3	4.9	Dark Green	Excellent	365	Phillipines
4	4.8	Dark Green	Excellent	229	Phillipines

[5 rows x 22 columns]

```
[31]: # Extracting the City names
```

```
city_names = final_df.City.unique()
city_names
```

```
[31]: array(['Makati City', 'Mandaluyong City', 'Pasay City', 'Pasig City',
        'Quezon City', 'San Juan City', 'Santa Rosa', 'Tagaytay City',
        'Taguig City', 'Brasília', 'Rio de Janeiro', 'São Paulo',
        'Albany', 'Armidale', 'Athens', 'Augusta', 'Balingup',
```

```
'Beechworth', 'Boise', 'Cedar Rapids/Iowa City', 'Chatham-Kent',
'Clatskanie', 'Cochrane', 'Columbus', 'Consort', 'Dalton',
'Davenport', 'Des Moines', 'Dicky Beach', 'Dubuque',
'East Ballina', 'Fernley', 'Flaxton', 'Forrest', 'Gainesville',
'Hepburn Springs', 'Huskisson', 'Inverloch', 'Lakes Entrance',
'Lakeview', 'Lincoln', 'Lorn', 'Macedon', 'Macon', 'Mayfield',
'Mc Millan', 'Middleton Beach', 'Miller', 'Monroe', 'Montville',
'Ojo Caliente', 'Orlando', 'Palm Cove', 'Paynesville', 'Penola',
'Pensacola', 'Phillip Island', 'Pocatello', 'Potrero', 'Princeton',
'Rest of Hawaii', 'Savannah', 'Singapore', 'Sioux City',
'Tampa Bay', 'Tanunda', 'Trentham East', 'Valdosta', 'Vernonia',
'Victor Harbor', 'Vineland Station', 'Waterloo', 'Weirton',
'Winchester Bay', 'Yorkton', 'Abu Dhabi', 'Dubai', 'Sharjah',
'Agra', 'Ahmedabad', 'Allahabad', 'Amritsar', 'Aurangabad',
'Bangalore', 'Bhopal', 'Bhubaneshwar', 'Chandigarh', 'Chennai',
'Coimbatore', 'Dehradun', 'Faridabad', 'Ghaziabad', 'Goa',
'Gurgaon', 'Guwahati', 'Hyderabad', 'Indore', 'Jaipur', 'Kanpur',
'Kochi', 'Kolkata', 'Lucknow', 'Ludhiana', 'Mangalore', 'Mohali',
'Mumbai', 'Mysore', 'Nagpur', 'Nashik', 'New Delhi', 'Noida',
'Panchkula', 'Patna', 'Puducherry', 'Pune', 'Ranchi',
'Secunderabad', 'Surat', 'Vadodara', 'Varanasi', 'Vizag',
'Bandung', 'Bogor', 'Jakarta', 'Tangerang', 'Auckland',
'Wellington City', 'Birmingham', 'Edinburgh', 'London',
'Manchester', 'Doha', 'Cape Town', 'Inner City', 'Johannesburg',
'Pretoria', 'Randburg', 'Sandton', 'Colombo', 'Ankara',
'Üstanbul'], dtype=object)
```

[32]: # Values count of the city names

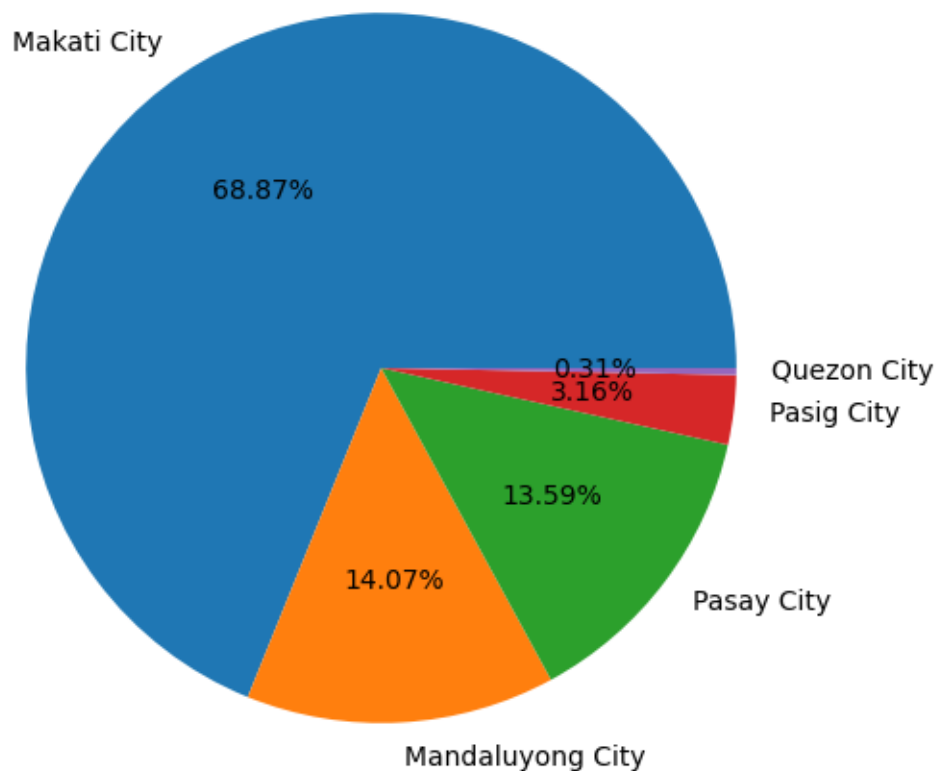
```
city_counts = final_df.City.value_counts().values
city_counts
```

```
[32]: array([5473, 1118, 1080, 251, 25, 21, 21, 21, 21, 21, 20,
20, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20,
20, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20,
20, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20,
20, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20,
18, 18, 16, 14, 11, 6, 4, 4, 3, 3, 2,
2, 2, 2, 2, 2, 2, 2, 1, 1, 1, 1,
1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
1, 1, 1, 1, 1, 1, 1, 1, 1], dtype=int64)
```

```
[33]: # Plotted a pie chart for cities distributions
```

```
plt.pie(city_counts[:5], labels=city_names[:5], autopct='%1.2f%%' )
```

```
[33]: ([<matplotlib.patches.Wedge at 0x23faed1b090>,  
      <matplotlib.patches.Wedge at 0x23faed57010>,  
      <matplotlib.patches.Wedge at 0x23faed707d0>,  
      <matplotlib.patches.Wedge at 0x23faed57d50>,  
      <matplotlib.patches.Wedge at 0x23faed735d0>],  
      [Text(-0.6145352824185932, 0.9123301960708633, 'Makati City'),  
      Text(0.0623675251198054, -1.0982305276263407, 'Mandaluyong City'),  
      Text(0.8789045225625368, -0.6614581167535246, 'Pasay City'),  
      Text(1.0922218418223437, -0.13058119407559224, 'Pasig City'),  
      Text(1.099946280005612, -0.010871113182029924, 'Quezon City')],  
      [Text(-0.3352010631374145, 0.497634652402289, '68.87%'),  
      Text(0.0340186500653484, -0.5990348332507311, '14.07%'),  
      Text(0.47940246685229276, -0.36079533641101336, '13.59%'),  
      Text(0.5957573682667329, -0.07122610585941394, '3.16%'),  
      Text(0.5999706981848791, -0.005929698099289049, '0.31%')])
```





```
[34]: # The top 10 Cusines based on the number of orders
```

```
final_df['Cuisines'].value_counts().sort_values(ascending=False).head(10)
```

```
[34]: Cuisines
      North Indian          936
      North Indian, Chinese  511
      Chinese               354
      Fast Food             354
      North Indian, Mughlai  334
      Cafe                  299
      Bakery                218
      North Indian, Mughlai, Chinese  197
      Bakery, Desserts      170
      Street Food           149
      Name: count, dtype: int64
```