

# level-1-task-4-online-delivery

September 6, 2024

## 1 Level 1 Task 4. Online Delivery

### 1.1 Import necessary libraries

```
[38]: import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
```

### 1.2 read csv file

```
[39]: df = pd.read_csv("D:\Data Analytics\Internships\Cognifyz\Dataset .csv")
df.head(3)
```

```
[39]: 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

                                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...

                                Locality \
0      Century City Mall, Poblacion, Makati City
1      Little Tokyo, Legaspi Village, Makati City
2      Edsa Shangri-La, 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

                                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
```

	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	

	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 rows x 21 columns]

```
[40]: df.shape
```

```
[40]: (9551, 21)
```

```
[41]: df.columns
```

```
[41]: 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')
```

### 1.3 1. Determine the percentage of restaurants that offer online delivery.

```
[47]: online_delivery = df['Has Online delivery'].value_counts().get('Yes')
       online_delivery
```

```
[47]: 2451
```

```
[48]: online_delivery = df['Has Online delivery'].value_counts()
       online_delivery
```

```
[48]: No      7100
       Yes     2451
       Name: Has Online delivery, dtype: int64
```

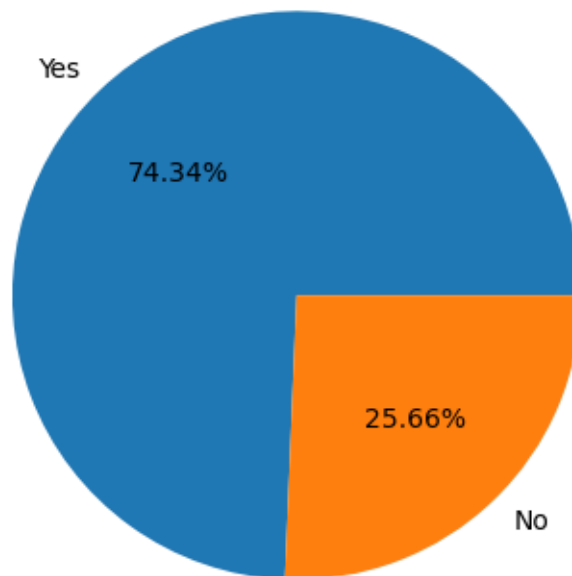
```
[49]: visual = online_delivery.reset_index()
       online_delivery
```

```
[49]: No      7100
       Yes     2451
       Name: Has Online delivery, dtype: int64
```

```
[50]: visual['Percentage'] = round((visual['Has Online delivery'] / len(df)) * 100, 2)
visual
```

```
[50]:   index  Has Online delivery  Percentage
0     No                    7100        74.34
1     Yes                    2451        25.66
```

```
[51]: plt.pie(visual['Percentage'], autopct='%1.2f%%', labels=["Yes", "No"])
plt.show()
```



#### 1.4 2. Compare the average ratings of restaurants with and without online delivery.

```
[58]: compare = round(df.groupby('Has Online delivery')['Aggregate rating'].mean(), 2)
compare = compare.reset_index()
compare
```

```
[58]:   Has Online delivery  Aggregate rating
0                No            2.47
1                Yes            3.25
```

```
[61]: plt.bar(compare['Has Online delivery'], compare['Aggregate rating'])
plt.title('average rating of restaurants with and without online delivery')
```

```
plt.xlabel('Is online delivery?')  
plt.ylabel('Average rating')  
plt.show()
```

