level-2-task-4-restaurant-chains

September 8, 2024

1 Level 2 Task 4. Restaurant Chains.ipynb

1.1 Import necessary libraries

[3]:
```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
```

1.2 read csv file

[4]:
```
df = pd.read_csv("D:\Data Analytics\Internships\Cognifyz\Dataset .csv")
df.head(3)
```

[4]:
```
   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]
```

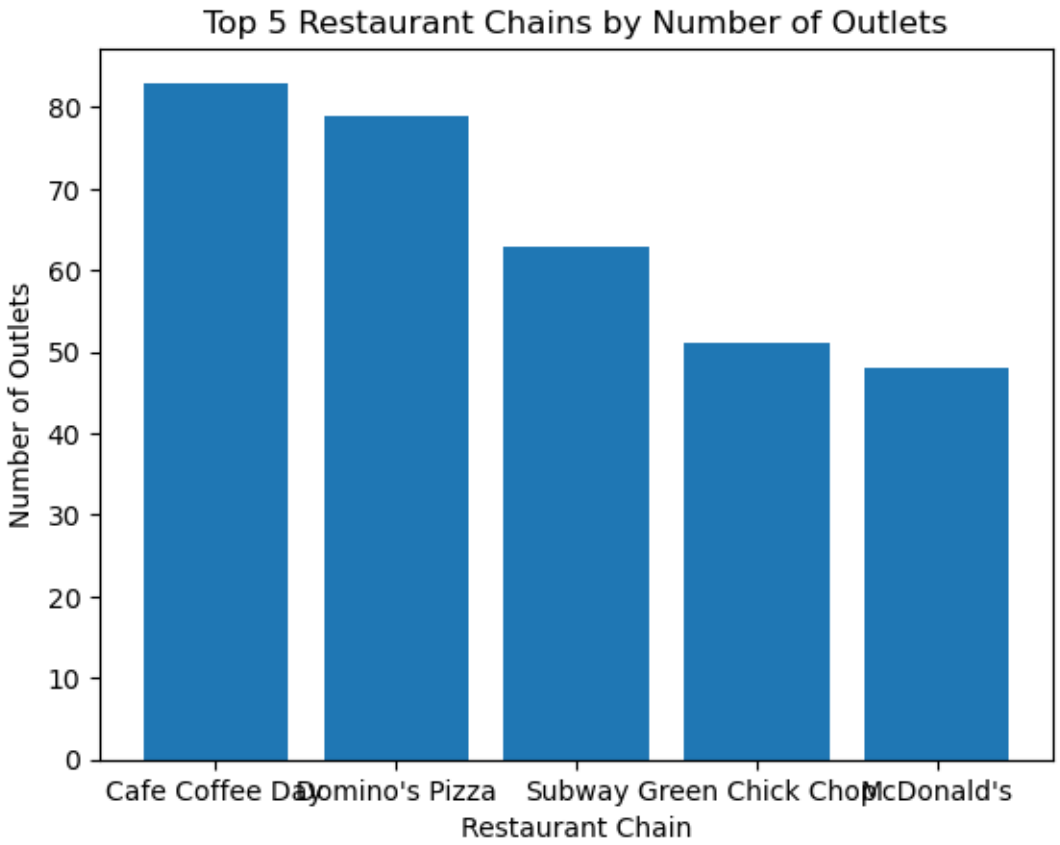
1.3 1. Identify if there are any restaurant chains present in the dataset.

[5]:
```
restaurant_chain = df.groupby("Restaurant Name").size().
↪reset_index(name="OutletCount")
new = restaurant_chain[restaurant_chain["OutletCount"] > 1]
restaurant_chains = new.sort_values(by="OutletCount", ascending=False)
```

[6]:
```
print(restaurant_chains[["Restaurant Name", "OutletCount"]].head(10))
```

```
      Restaurant Name  OutletCount
1098   Cafe Coffee Day           83
2098    Domino's Pizza           79
6106            Subway           63
2716  Green Chick Chop           51
4077       McDonald's            48
3478        Keventers           34
4961        Pizza Hut           30
2619             Giani           29
680     Baskin Robbins           28
663    Barbeque Nation           26
```

[7]:
```
plt.bar(restaurant_chains["Restaurant Name"][:5],␣
↪restaurant_chains["OutletCount"][:5])
plt.xlabel("Restaurant Chain")
plt.ylabel("Number of Outlets")
plt.title("Top 5 Restaurant Chains by Number of Outlets")
plt.show()
```



1.4 2. Analyze the ratings and popularity of different restaurant chains.

Ratings

[11]:
```
ratings = df.groupby("Restaurant Name")["Aggregate rating"].mean().
 ↪reset_index(name="Average Rating").sort_values(by="Average Rating",␣
 ↪ascending=False)
ratings
```

[11]:

	Restaurant Name	Average Rating
5322	Restaurant Mosaic @ The Orient	4.9
4177	Ministry of Crab	4.9
4135	Miann	4.9
5757	Shorts Burger and Shine	4.9
4165	Milse	4.9
…	…	…
1105	Cafe Corner	0.0
4905	Pheva Tandooris	0.0
4913	Pick & Carry	0.0
1096	Cafe Brownie	0.0

```
2292  Famous Parantha and Poori Sabzi             0.0

[7446 rows x 2 columns]
```

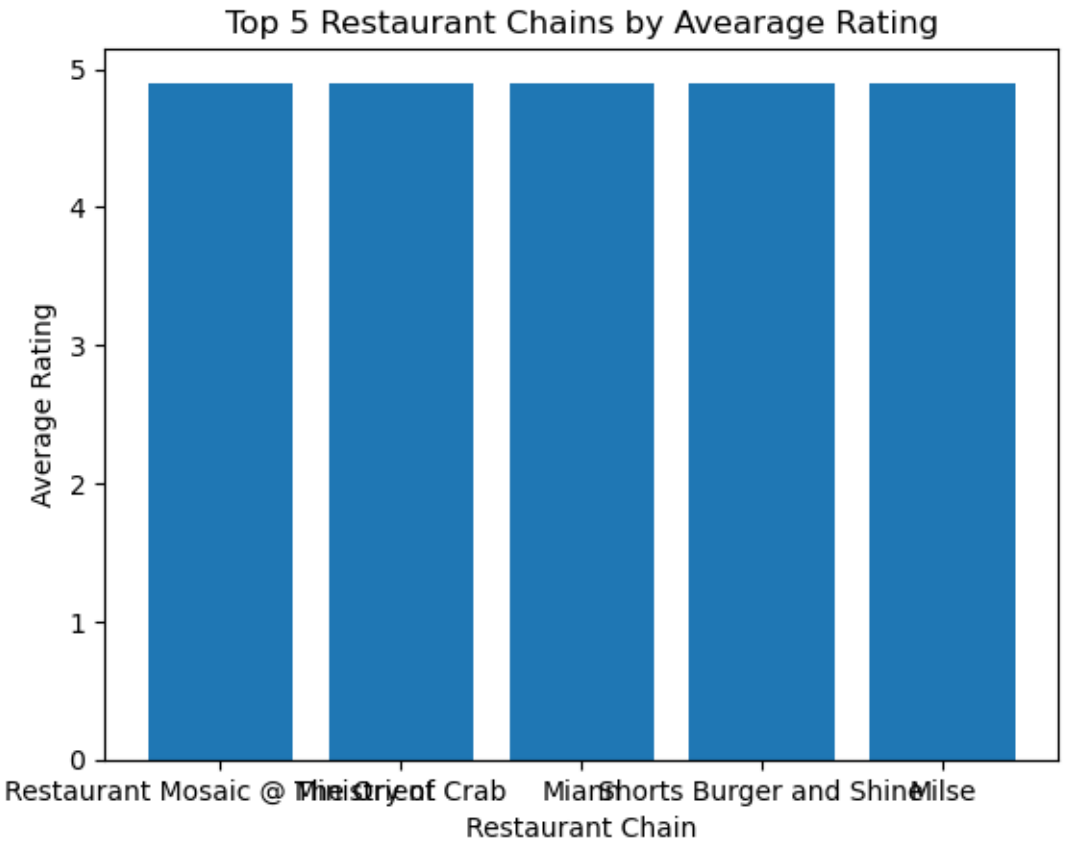
Popularity

[13]:
```
votes = df.groupby("Restaurant Name")["Votes"].sum().reset_index(name="Total Votes").sort_values(by="Total Votes", ascending=False)
votes
```

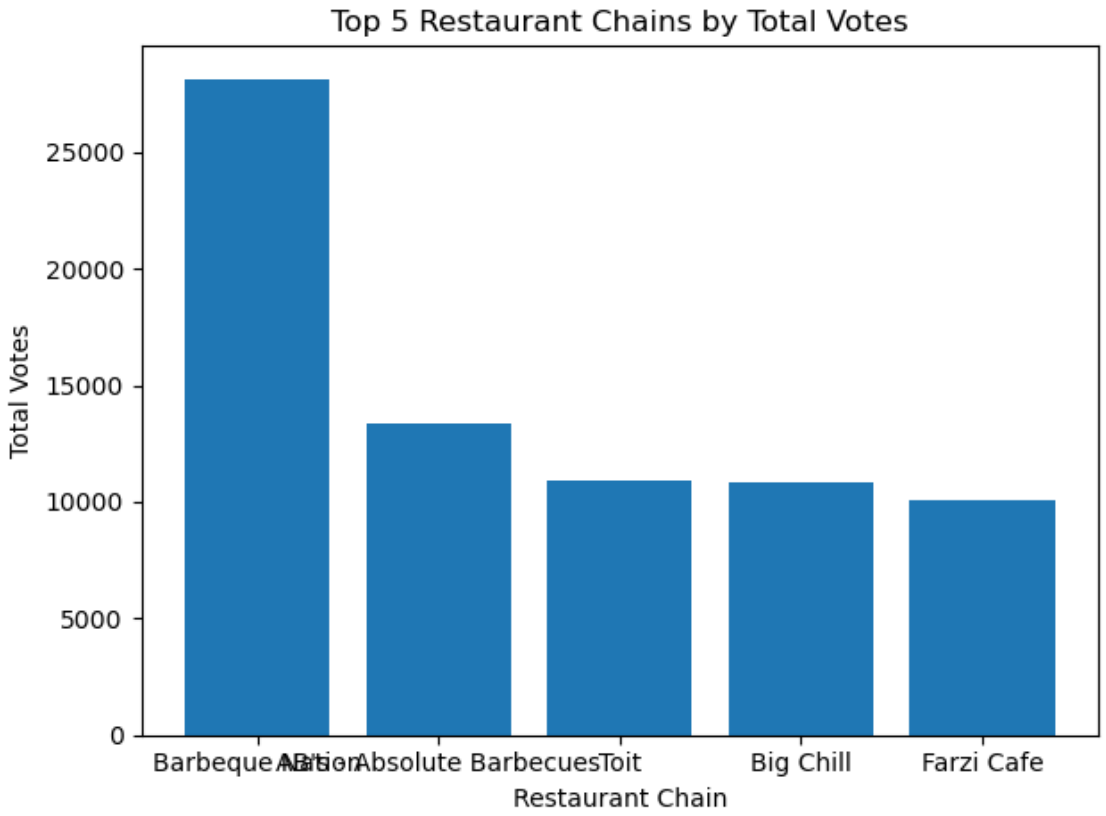
[13]:
```
                Restaurant Name  Total Votes
663             Barbeque Nation        28142
101   AB's - Absolute Barbecues        13400
6943                        Toit        10934
785                   Big Chill        10853
2297                 Farzi Cafe        10098
…                           …           …
4375                 Muncheezz            0
6217            Swiss Gourmessa            0
2110      Dosa and Pizza Corner            0
6215            Sweets n Treats            0
2433               Food Station            0

[7446 rows x 2 columns]
```

[15]:
```
plt.bar(ratings["Restaurant Name"][:5], ratings["Average Rating"][:5])
plt.xlabel("Restaurant Chain")
plt.ylabel("Average Rating")
plt.title("Top 5 Restaurant Chains by Avearage Rating")
plt.show()
```



[18]:
```
plt.bar(votes["Restaurant Name"][:5], votes["Total Votes"][:5])
plt.xlabel("Restaurant Chain")
plt.ylabel("Total Votes")
plt.title("Top 5 Restaurant Chains by Total Votes")
plt.tight_layout()
plt.show()
```


Top 5 Restaurant Chains by Total Votes
Total Votes
25000
20000
15000
10000
5000
0
Barbeque Nation
Absolute Barbecues
Toit
Big Chill
Farzi Cafe
Restaurant Chain