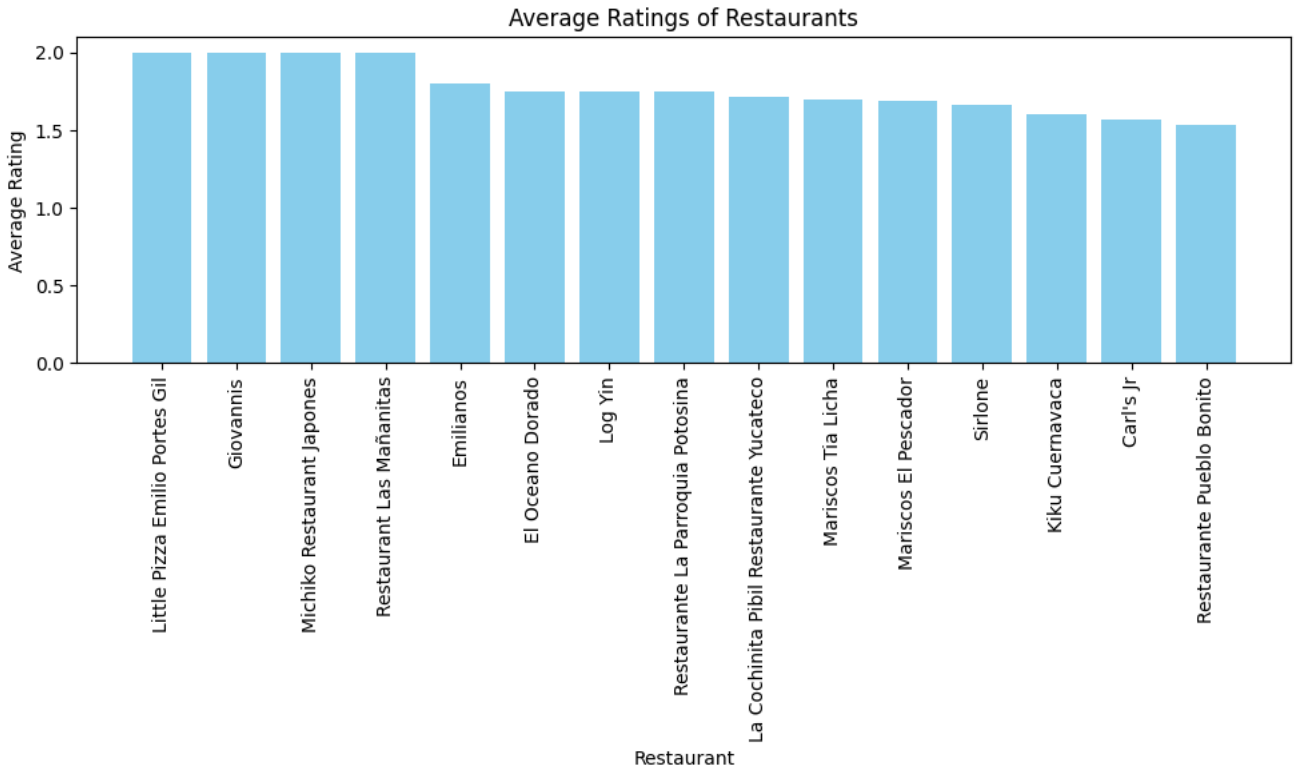
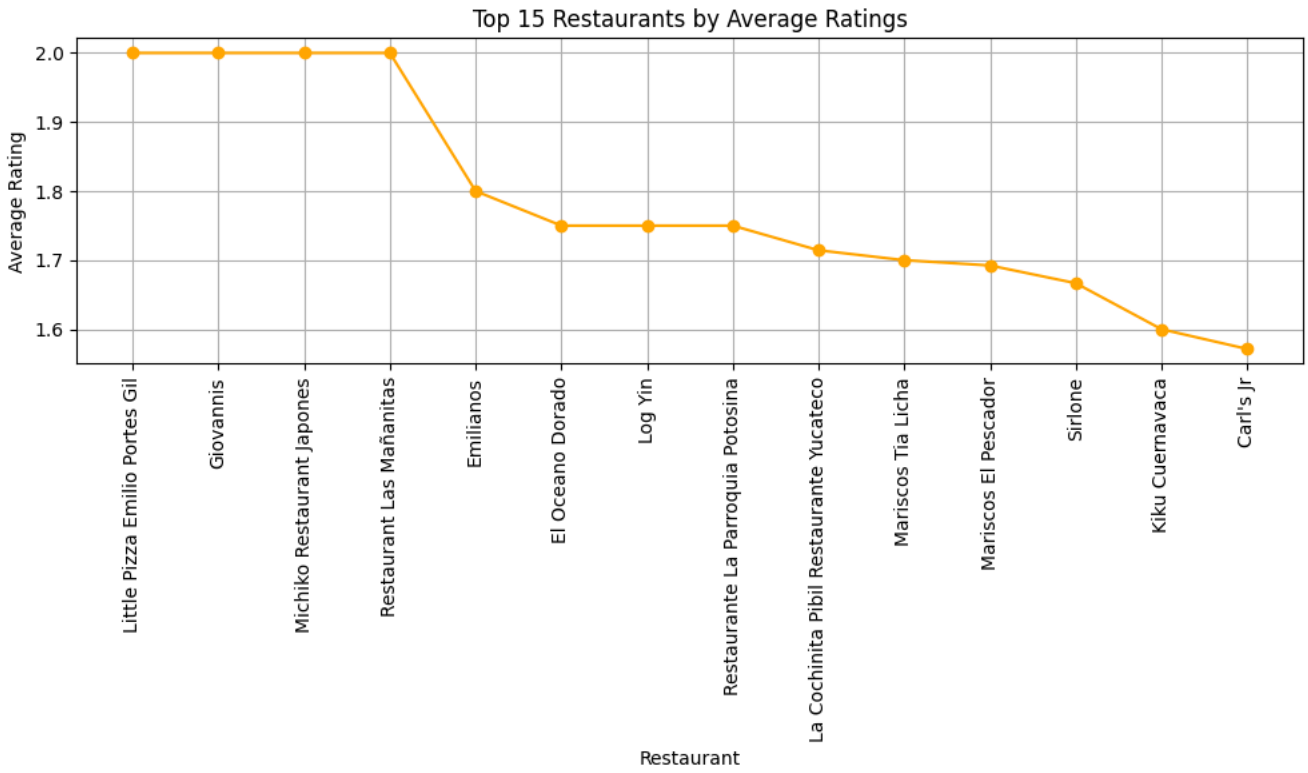
BAR GRAPH

```
import pandas as pd
import matplotlib.pyplot as plt

# Load the CSV files into pandas DataFrames
restaurants_df = pd.read_csv('restaurants.csv')
ratings_df = pd.read_csv('ratings.csv')

# Merge the DataFrames on a common column, such as restaurant ID
merged_df = pd.merge(restaurants_df, ratings_df, on='Restaurant_ID')

# Calculate the average ratings for each restaurant
average_ratings = merged_df.groupby('Name')['Food_Rating'].mean().reset_index()

# Sort the restaurants by average rating
sorted_ratings = average_ratings.sort_values(by='Food_Rating', ascending=False)
# Select the top 15 restaurants
top_15_ratings = sorted_ratings.head(15)

# Plot the bar graph
plt.figure(figsize=(10, 6))
plt.bar(top_15_ratings['Name'], top_15_ratings['Food_Rating'], color='skyblue')
plt.xlabel('Restaurant')
plt.ylabel('Average Rating')
plt.title('Average Ratings of Restaurants')
plt.xticks(rotation=90)
plt.tight_layout()
plt.show()
```



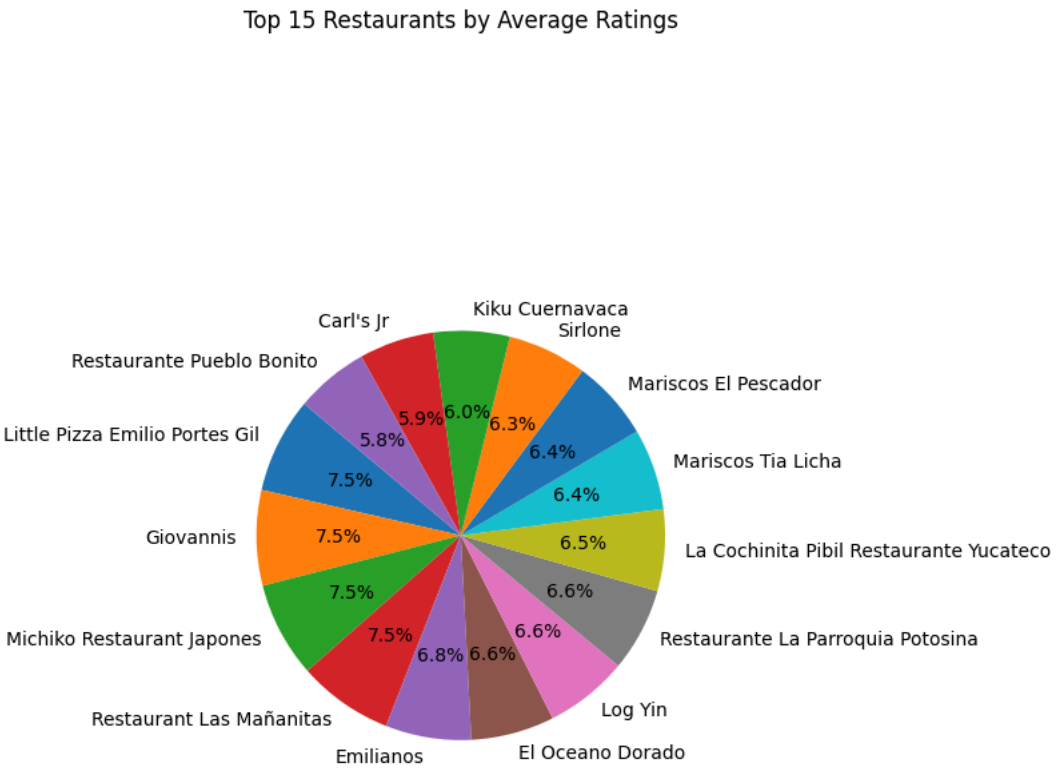
LINE PLOT

```
import pandas as pd
import matplotlib.pyplot as plt

# Load the CSV files into pandas DataFrames
restaurants_df = pd.read_csv('restaurants.csv')
ratings_df = pd.read_csv('ratings.csv')

# Merge the DataFrames on a common column, such as restaurant ID
merged_df = pd.merge(restaurants_df, ratings_df, on='Restaurant_ID')

# Calculate the average ratings for each restaurant
average_ratings = merged_df.groupby('Name')['Food_Rating'].mean().reset_index()

# Sort the restaurants by average rating
sorted_ratings = average_ratings.sort_values(by='Food_Rating', ascending=False)

# Select the top 14 restaurants
top_15_ratings = sorted_ratings.head(14)

# Plot the line graph
plt.figure(figsize=(10, 6))
plt.plot(top_15_ratings['Name'], top_15_ratings['Food_Rating'], marker='o', color='Orange', linestyle='-')
plt.xlabel('Restaurant')
plt.ylabel('Average Rating')
plt.title('Top 15 Restaurants by Average Ratings')
plt.xticks(rotation=90)
plt.tight_layout()
plt.grid(True)
plt.show()
```



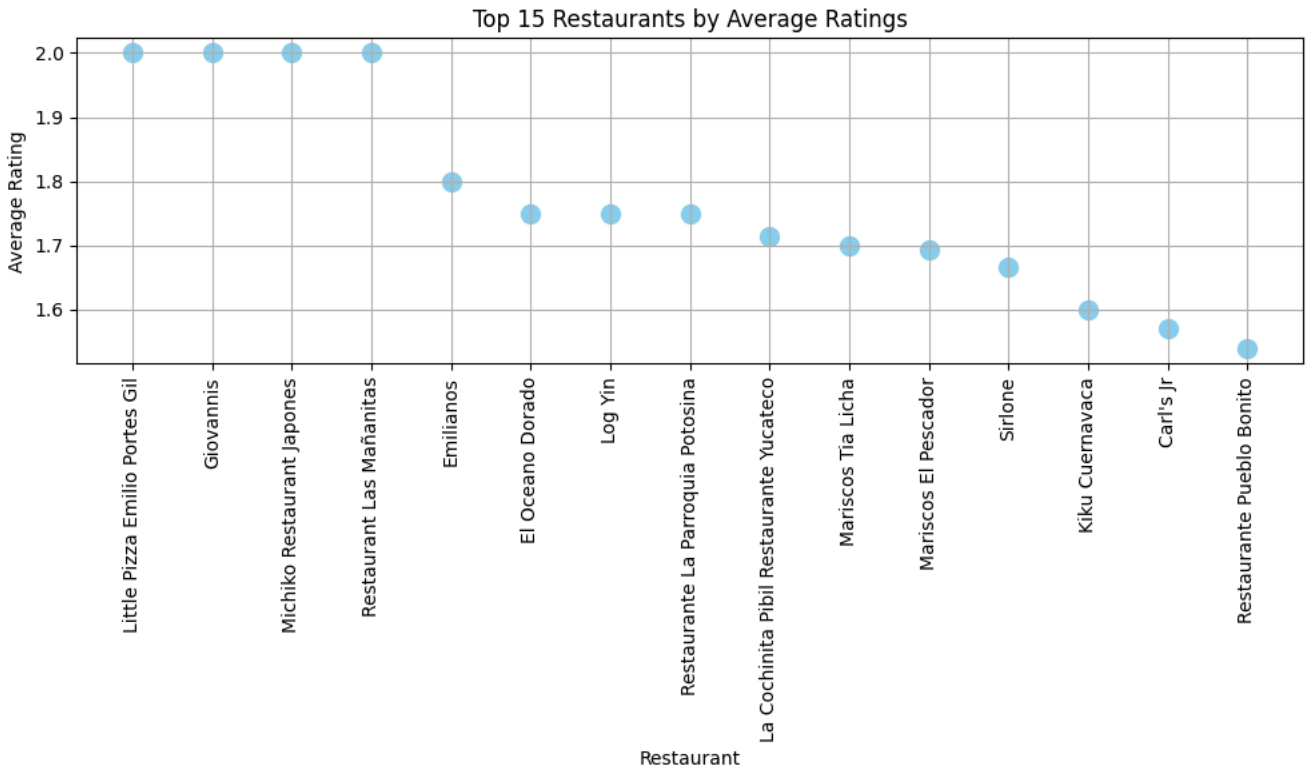
PIE CHART

```
import pandas as pd
import matplotlib.pyplot as plt

# Load the CSV files into pandas DataFrames
restaurants_df = pd.read_csv('restaurants.csv')
ratings_df = pd.read_csv('ratings.csv')

# Merge the DataFrames on a common column, such as restaurant ID
merged_df = pd.merge(restaurants_df, ratings_df, on='Restaurant_ID')

# Calculate the average ratings for each restaurant
average_ratings = merged_df.groupby('Name')['Food_Rating'].mean().reset_index()

# Sort the restaurants by average rating
sorted_ratings = average_ratings.sort_values(by='Food_Rating', ascending=False)

# Select the top 14 restaurants
top_15_ratings = sorted_ratings.head(15)

# Plot the pie chart
plt.figure(figsize=(8, 8))
plt.pie(top_15_ratings['Food_Rating'], labels=top_15_ratings['Name'], autopct='%1.1f%%', startangle=140)
plt.title('Top 15 Restaurants by Average Ratings')
plt.axis('equal')  # Equal aspect ratio ensures that pie is drawn as a circle.
plt.tight_layout()
plt.show()
```



SCATTER PLOT

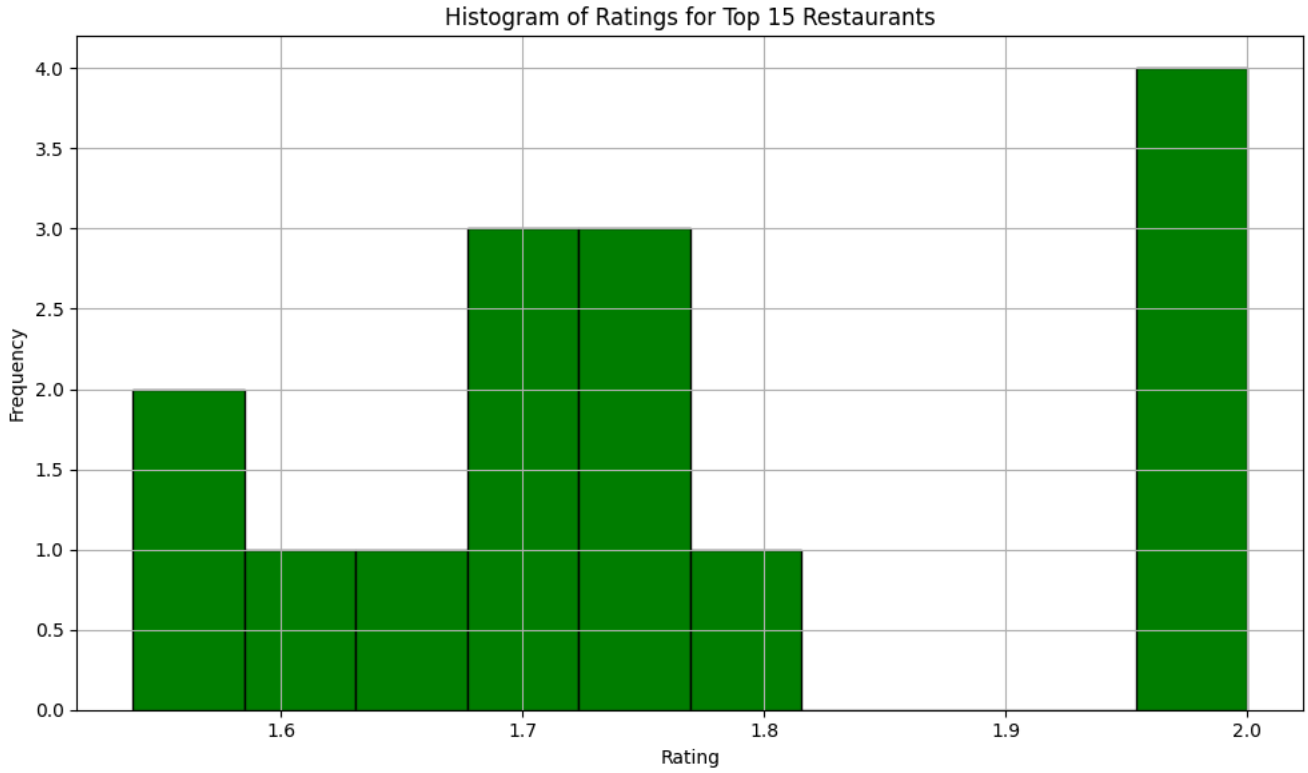
```
import pandas as pd
import matplotlib.pyplot as plt

# Load the CSV files into pandas DataFrames
restaurants_df = pd.read_csv('restaurants.csv')
ratings_df = pd.read_csv('ratings.csv')

# Merge the DataFrames on a common column, such as restaurant ID
merged_df = pd.merge(restaurants_df, ratings_df, on='Restaurant_ID')

# Calculate the average ratings for each restaurant
average_ratings = merged_df.groupby('Name')['Food_Rating'].mean().reset_index()

# Sort the restaurants by average rating
sorted_ratings = average_ratings.sort_values(by='Food_Rating', ascending=False)

# Select the top 15 restaurants
top_15_ratings = sorted_ratings.head(15)

# Plot the scatter plot
plt.figure(figsize=(10, 6))
plt.scatter(range(1, 16), top_15_ratings['Food_Rating'], color='skyblue', s=100)
plt.xlabel('Restaurant')
plt.ylabel('Average Rating')
plt.title('Top 15 Restaurants by Average Ratings')
plt.xticks(range(1, 16), top_15_ratings['Name'], rotation=90)
plt.tight_layout()
plt.grid(True)
plt.show()
```



HISTOGRAM

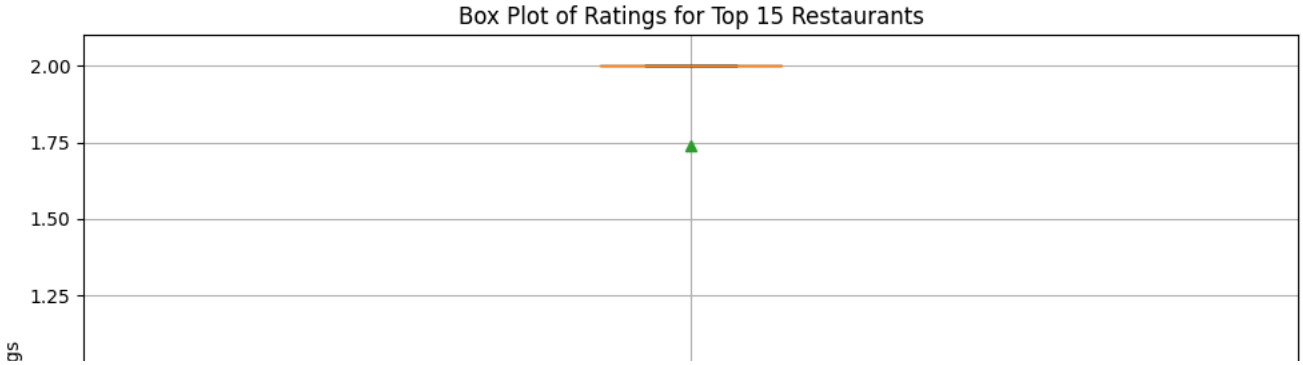
```
import pandas as pd
import matplotlib.pyplot as plt

# Load the CSV files into pandas DataFrames
restaurants_df = pd.read_csv('restaurants.csv')
ratings_df = pd.read_csv('ratings.csv')

# Merge the DataFrames on a common column, such as restaurant ID
merged_df = pd.merge(restaurants_df, ratings_df, on='Restaurant_ID')

# Calculate the average ratings for each restaurant
average_ratings = merged_df.groupby('Name')['Food_Rating'].mean().reset_index()

# Sort the restaurants by average rating
sorted_ratings = average_ratings.sort_values(by='Food_Rating', ascending=False)
```

```
# Select the top 15 restaurants
top_15_ratings = sorted_ratings.head(15)

# Plot the histogram
plt.figure(figsize=(10, 6))
plt.hist(top_15_ratings['Food_Rating'], bins=10, color='green', edgecolor='black')
plt.xlabel('Rating')
plt.ylabel('Frequency')
plt.title('Histogram of Ratings for Top 15 Restaurants')
plt.grid(True)
plt.tight_layout()
plt.show()
```



BOX PLOT

```
import pandas as pd
import matplotlib.pyplot as plt

# Load the CSV files into pandas DataFrames
restaurants_df = pd.read_csv('restaurants.csv')
ratings_df = pd.read_csv('ratings.csv')

# Merge the DataFrames on a common column, such as restaurant ID
merged_df = pd.merge(restaurants_df, ratings_df, on='Restaurant_ID')
# Calculate the average ratings for each restaurant
average_ratings = merged_df.groupby('Name')['Food_Rating'].mean().reset_index()

# Sort the restaurants by average rating
sorted_ratings = average_ratings.sort_values(by='Food_Rating', ascending=False)

# Select the top 15 restaurants
top_15_ratings = sorted_ratings.head(15)

# Filter the merged DataFrame for the top 15 restaurants
top_15_data = merged_df[merged_df['Name'].isin(top_15_ratings['Name'])]

# Create a box plot for the ratings of the top 15 restaurants
plt.figure(figsize=(10, 6))
plt.boxplot(top_15_data['Food_Rating'], patch_artist=True, showmeans=True)
plt.xlabel('Top 15 Restaurants')
plt.ylabel('Ratings')
plt.title('Box Plot of Ratings for Top 15 Restaurants')
plt.xticks([1], ['Top 15 Restaurants'])  # Customizing x-axis tick labels
plt.grid(True)
plt.tight_layout()
plt.show()
```


Box Plot of Ratings for Top 15 Restaurants
2.00
1.75
1.50
1.25