annmary-211-lab10

September 23, 2023

[1]:
```
import numpy as np
import matplotlib.pyplot as plt
import pandas as pd
```

[2]:
```
from google.colab import drive
drive.mount('/content/drive')
```

```
Mounted at /content/drive
```

[3]:
```
df = pd.read_csv("/content/drive/MyDrive/Untitled folder/Coursera.csv")
df.head(10)
```

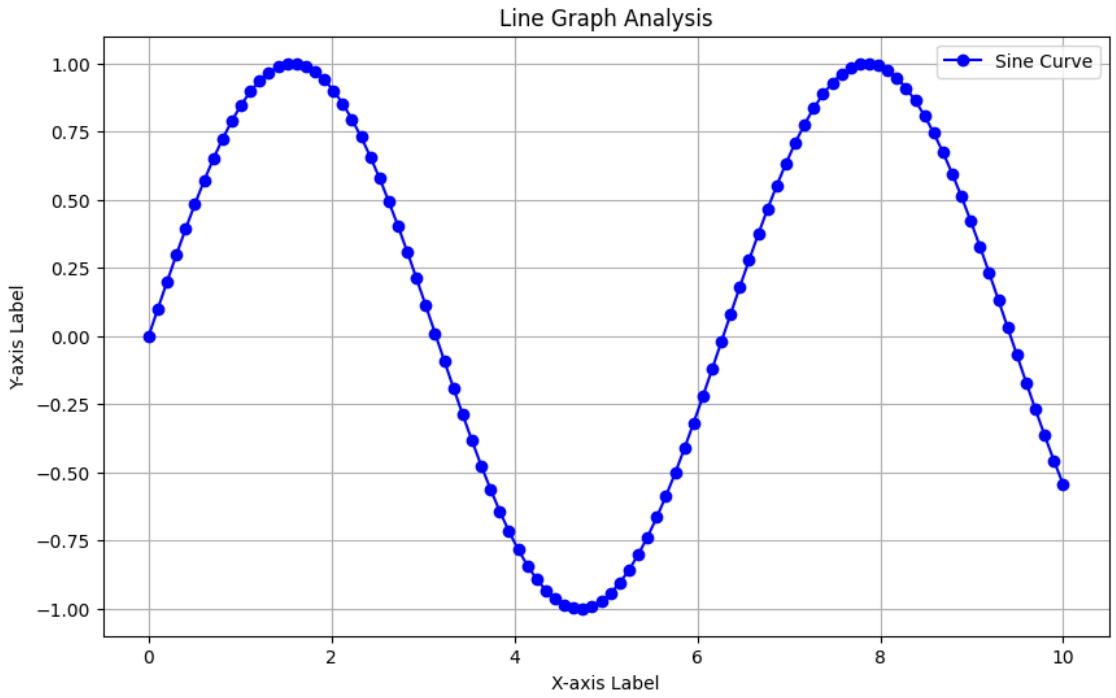
[3]:

	Course Name	University	Difficulty Level	Course Rating	Course URL
0	Write A Feature Length Screenplay For Film Or …	Michigan State University	Beginner	4.8	https://www.coursera.org/learn/write-a-feature…
1	Business Strategy: Business Model Canvas Analy…	Coursera Project Network	Beginner	4.8	
2	Silicon Thin Film Solar Cells	cole Polytechnique	Advanced	4.1	
3	Finance for Managers	IESE Business School	Intermediate	4.8	
4	Retrieve Data using Single-Table SQL Queries	Coursera Project Network	Beginner	4.6	
5	Building Test Automation Framework using Selen…	Coursera Project Network	Beginner	4.7	
6	Doing Business in China Capstone	The Chinese University of Hong Kong	Advanced	3.3	
7	Programming Languages, Part A	University of Washington	Intermediate	4.9	
8	The Roles and Responsibilities of Nonprofit Bo…	The State University of New York	Intermediate	4.3	
9	Business Russian Communication. Part 3	Saint Petersburg State University	Intermediate	Not Calibrated	

```
1  https://www.coursera.org/learn/canvas-analysis…
2  https://www.coursera.org/learn/silicon-thin-fi…
3  https://www.coursera.org/learn/operational-fin…
4  https://www.coursera.org/learn/single-table-sq…
5  https://www.coursera.org/learn/building-test-a…
6  https://www.coursera.org/learn/doing-business-…
7  https://www.coursera.org/learn/programming-lan…
8     https://www.coursera.org/learn/nonprofit-gov-2
9  https://www.coursera.org/learn/business-russia…

                                  Course Description  \
0  Write a Full Length Feature Film Script  In th…
1  By the end of this guided project, you will be…
2  This course consists of a general presentation…
3  When it comes to numbers, there is always more…
4  In this course you ll learn how to effectively…
5  Selenium is one of the most widely used functi…
6  Doing Business in China Capstone enables you t…
7  This course is an introduction to the basic co…
8  This course provides a more in-depth look at t…
9  Russian is considered to be one of the most di…

                                              Skills
0  Drama  Comedy  peering  screenwriting  film  D…
1  Finance  business plan  persona (user experien…
2  chemistry  physics  Solar Energy  film  lambda…
3  accounts receivable  dupont analysis  analysis…
4  Data Analysis  select (sql)  database manageme…
5  maintenance  test case  test automation  scree…
6  marketing plan  Planning  Marketing  consumpti…
7  inference  ml (programming language)  higher-o…
8  Planning  Peer Review  fundraising  strategic …
9  Russian  market (economics)  tax exemption  co…
```

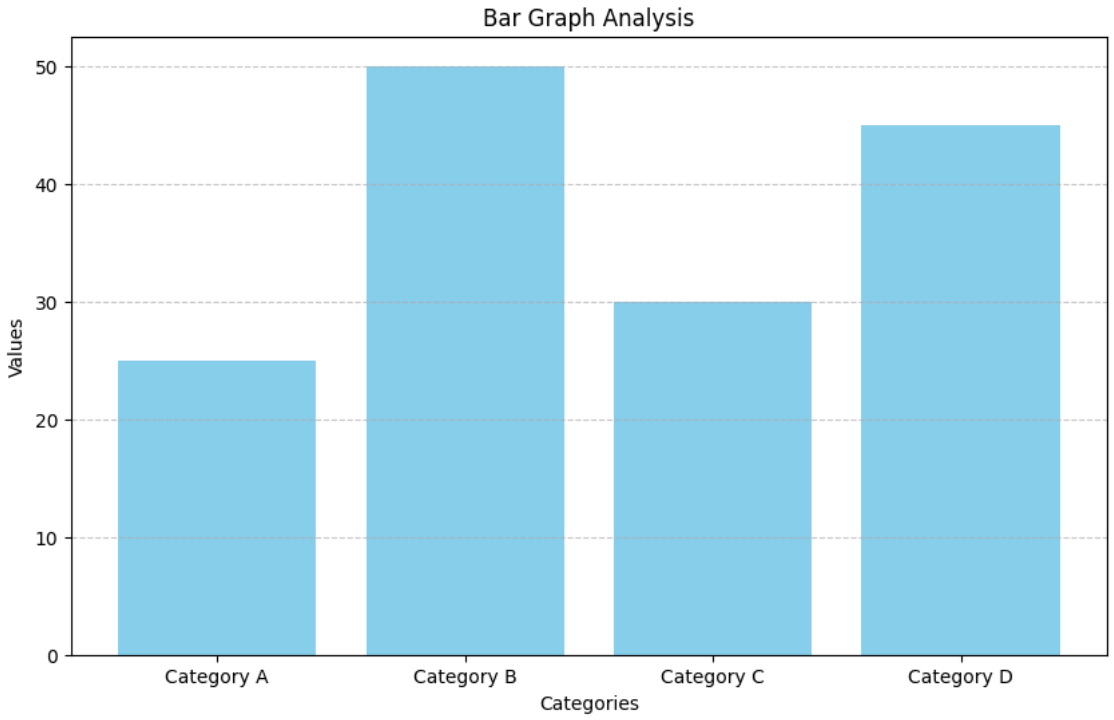
[4]:
```python
import matplotlib.pyplot as plt
import numpy as np

# Generate some example data (replace with your own data)
x = np.linspace(0, 10, 100)  # X-axis values
y = np.sin(x)  # Y-axis values (sine function for demonstration)

# Create a line plot
plt.figure(figsize=(10, 6))  # Optional: Set the figure size
plt.plot(x, y, marker='o', linestyle='-', color='b', label='Sine Curve')  #␣
 ↪Customize the plot appearance

# Add labels and a title
```

```
plt.xlabel('X-axis Label')
plt.ylabel('Y-axis Label')
plt.title('Line Graph Analysis')

# Add a legend
plt.legend()

# Show the plot
plt.grid(True)  # Optional: Add grid lines
plt.show()
```



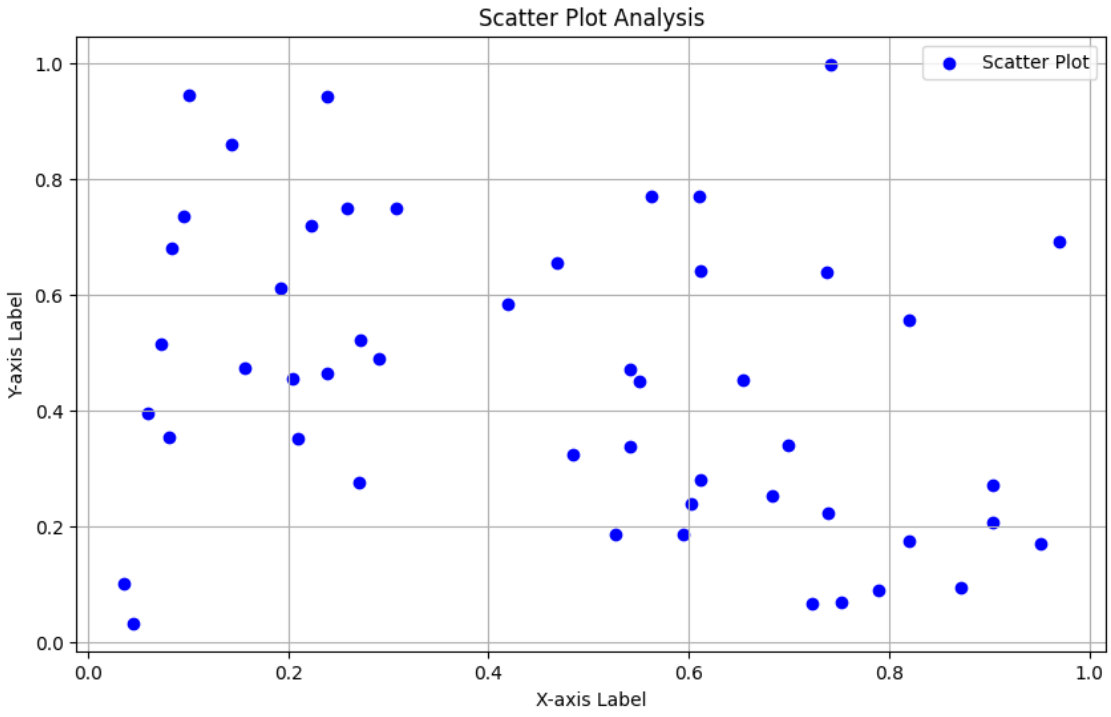
[5]:
```
import matplotlib.pyplot as plt
import numpy as np

# Generate some example data (replace with your own data)
categories = ['Category A', 'Category B', 'Category C', 'Category D']
values = [25, 50, 30, 45]  # Replace with your data values

# Create a bar plot
plt.figure(figsize=(10, 6))  # Optional: Set the figure size
plt.bar(categories, values, color='skyblue')  # Customize the bar appearance

# Add labels and a title
plt.xlabel('Categories')
```

```
plt.ylabel('Values')
plt.title('Bar Graph Analysis')

# Show the plot
plt.grid(axis='y', linestyle='--', alpha=0.7)  # Optional: Add horizontal grid lines
plt.show()
```



[6]:
```
import matplotlib.pyplot as plt
import numpy as np

# Generate some example data (replace with your own data)
x = np.random.rand(50)  # X-axis values (random data)
y = np.random.rand(50)  # Y-axis values (random data)

# Create a scatter plot
plt.figure(figsize=(10, 6))  # Optional: Set the figure size
plt.scatter(x, y, marker='o', color='blue', label='Scatter Plot')  # Customize the scatter plot appearance

# Add labels and a title
plt.xlabel('X-axis Label')
plt.ylabel('Y-axis Label')
```

```
plt.title('Scatter Plot Analysis')

# Add a legend
plt.legend()

# Show the plot
plt.grid(True)  # Optional: Add grid lines
plt.show()
```



[7]:
```
import matplotlib.pyplot as plt
import seaborn as sns
import numpy as np

# Generate some example data (replace with your own data)
np.random.seed(0)
data = np.random.rand(10, 10)  # Replace with your own dataset or correlation␣
↪matrix

# Create a correlation matrix
correlation_matrix = np.corrcoef(data, rowvar=False)

# Create a heatmap
plt.figure(figsize=(10, 8))
sns.set(font_scale=1.2)
```

```
sns.heatmap(correlation_matrix, annot=True, fmt=".2f", cmap="coolwarm",␣
 ↪square=True)

# Add a title
plt.title('Correlation Heatmap')

# Show the plot
plt.show()
```