**Simple Line Plot**

import numpy as np

import matplotlib.pyplot as plt

# Generate data

x = np.linspace(0, 10, 100)

y = np.sin(x)

# Create plot

plt.plot(x, y)

# Add title and labels

plt.title('Simple Line Plot')

plt.xlabel('X-axis')

plt.ylabel('Y-axis')

# Show plot

plt.show()

**2. Bar Chart with Pandas**

import pandas as pd

import matplotlib.pyplot as plt

# Create a DataFrame

data = {'Category': ['A', 'B', 'C', 'D'],

'Values': [23, 45, 56, 78]}

df = pd.DataFrame(data)

# Create bar chart

df.plot(kind='bar', x='Category', y='Values')

# Add title and labels

plt.title('Bar Chart')

plt.xlabel('Category')

plt.ylabel('Values')

# Show plot

plt.show()

**3. Scatter Plot**

import numpy as np

import matplotlib.pyplot as plt

# Generate data

x = np.random.rand(100)

y = np.random.rand(100)

# Create scatter plot

plt.scatter(x, y)

# Add title and labels

plt.title('Scatter Plot')

plt.xlabel('X-axis')

plt.ylabel('Y-axis')

# Show plot

plt.show()

**4. Histogram**

import numpy as np

import matplotlib.pyplot as plt

# Generate data

data = np.random.randn(1000)

# Create histogram

plt.hist(data, bins=30, edgecolor='black')

# Add title and labels

plt.title('Histogram')

plt.xlabel('Value')

plt.ylabel('Frequency')

# Show plot

plt.show()

**5. Pie Chart with Pandas**

import pandas as pd

import matplotlib.pyplot as plt

# Create a DataFrame

data = {'Category': ['A', 'B', 'C', 'D'],

'Values': [23, 45, 56, 78]}

df = pd.DataFrame(data)

# Create pie chart

df.set\_index('Category').plot(kind='pie', y='Values', autopct='%1.1f%%')

# Add title

plt.title('Pie Chart')

# Show plot

plt.show()

**6. Multiple Line Plot**

import numpy as np

import matplotlib.pyplot as plt

# Generate data

x = np.linspace(0, 10, 100)

y1 = np.sin(x)

y2 = np.cos(x)

# Create plot

plt.plot(x, y1, label='sin(x)')

plt.plot(x, y2, label='cos(x)')

# Add title, labels, and legend

plt.title('Multiple Line Plot')

plt.xlabel('X-axis')

plt.ylabel('Y-axis')

plt.legend()

# Show plot

plt.show()

**7. Box Plot**

import numpy as np

import matplotlib.pyplot as plt

# Generate data

data = np.random.randn(100)

# Create box plot

plt.boxplot(data)

# Add title and labels

plt.title('Box Plot')

plt.xlabel('Sample')

plt.ylabel('Value')

# Show plot

plt.show()

**8. Area Plot with Pandas**

import pandas as pd

import matplotlib.pyplot as plt

# Create a DataFrame

data = {'Year': [2015, 2016, 2017, 2018, 2019],

'Sales': [200, 250, 300, 350, 400]}

df = pd.DataFrame(data)

# Create area plot

df.set\_index('Year').plot(kind='area')

# Add title and labels

plt.title('Area Plot')

plt.xlabel('Year')

plt.ylabel('Sales')

# Show plot

plt.show()

**9. Heatmap with NumPy**

import numpy as np

import matplotlib.pyplot as plt

# Generate data

data = np.random.rand(10, 10)

# Create heatmap

plt.imshow(data, cmap='hot', interpolation='nearest')

# Add title and colorbar

plt.title('Heatmap')

plt.colorbar()

# Show plot

plt.show()

**10. Violin Plot**

import numpy as np

import matplotlib.pyplot as plt

# Generate data

data = [np.random.normal(0, std, 100) for std in range(1, 5)]

# Create violin plot

plt.violinplot(data)

# Add title and labels

plt.title('Violin Plot')

plt.xlabel('Sample')

plt.ylabel('Value')

# Show plot

plt.show()

Bottom of Form