

1. Scatter Plot – Height vs Weight

```
import matplotlib.pyplot as plt
import numpy as np
# Students' height and weight
height = np.array([150, 155, 160, 165, 170, 175, 180])
weight = np.array([45, 50, 55, 60, 65, 72, 78])
plt.scatter(height, weight, color='blue')
plt.title('Height vs Weight of Students')
plt.xlabel('Height (cm)')
plt.ylabel('Weight (kg)')
plt.show()
```

■ Shows relationship between height & weight.

2. Line Plot – Temperature Over a Week

```
import matplotlib.pyplot as plt
import numpy as np
# Temperature over a week
days = np.array(['Mon', 'Tue', 'Wed', 'Thu', 'Fri', 'Sat', 'Sun'])
temperature = np.array([30, 32, 31, 29, 35, 36, 34])
plt.plot(days, temperature, color='green', marker='o')
plt.title('Daily Temperature Over a Week')
plt.xlabel('Days')
plt.ylabel('Temperature (°C)')
plt.show()
```

■ Shows trend of temperature across the week.

3. Bar Chart – Sales by Product

```
import matplotlib.pyplot as plt
import numpy as np
# Sales data
products = np.array(['Laptops', 'Mobiles', 'Tablets', 'Headphones'])
sales = np.array([250, 400, 150, 300])
plt.bar(products, sales, color='orange')
plt.title('Sales by Product')
plt.xlabel('Products')
plt.ylabel('Units Sold')
plt.show()
```

■ Compares sales of products.

4. Histogram – Students' Marks Distribution

```
import matplotlib.pyplot as plt
import numpy as np
```

```
# Students marks
marks = np.random.randint(40, 100, 100)
plt.hist(marks, bins=10, color='purple', edgecolor='black')
plt.title("Distribution of Students' Marks")
plt.xlabel('Marks Range')
plt.ylabel('Number of Students')
plt.show()
```

■ Shows how marks are distributed.

5. Pie Chart – Market Share of Companies

```
import matplotlib.pyplot as plt
import numpy as np
# Market share
companies = ['Apple', 'Samsung', 'Xiaomi', 'Others']
market_share = np.array([30, 25, 20, 25])
plt.pie(market_share, labels=companies, autopct='%1.1f%%', startangle=90)
plt.title('Mobile Market Share')
plt.show()
```

■ Shows percentage of market share.