How to Build a Line Graph in Matplotlib

CodeRebel YouTube Channel

Step 1: Importing Libraries

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

Step 2: Preparing Data

- # Example data
- x = np.linspace(0, 10, 100)
- y = np.sin(x)

Step 3: Creating the Plot

- plt.plot(x, y, label='Sine Wave', color='blue', linestyle='-', marker='o')

Step 4: Customizing the Graph

- plt.title('Sine Wave Example')
- plt.xlabel('X-axis')
- plt.ylabel('Y-axis')
- plt.legend()
- plt.grid(True)

Step 5: Displaying the Graph

- plt.show()

Example 1: Basic Plot

- x = np.arange(0, 10, 1)
- y = x**2
- plt.plot(x, y, label='Square Function', color='green')
- plt.title('Basic Line Plot')
- plt.xlabel('X-axis')
- plt.ylabel('Y-axis')
- plt.legend()
- plt.show()

Example 2: Multiple Lines

- x = np.linspace(0, 10, 100)
- y1 = np.sin(x)
- y2 = np.cos(x)
- plt.plot(x, y1, label='Sine')
- plt.plot(x, y2, label='Cosine', linestyle='--')
- plt.title('Multiple Lines Example')
- plt.xlabel('X-axis')
- plt.ylabel('Y-axis')
- plt.legend()

Example 3: Advanced Customization

- x = np.linspace(0, 10, 100)
- y = np.sin(x)
- plt.plot(x, y, label='Sin(x)', color='purple', linestyle=':', marker='x', markersize=8)
- plt.title('Advanced Customization')
- plt.xlabel('X-axis')
- plt.ylabel('Y-axis')
- plt.legend()
- plt.grid(True)

Conclusion

- Thank you for watching!
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