

31-10-2024

Training Day – 31

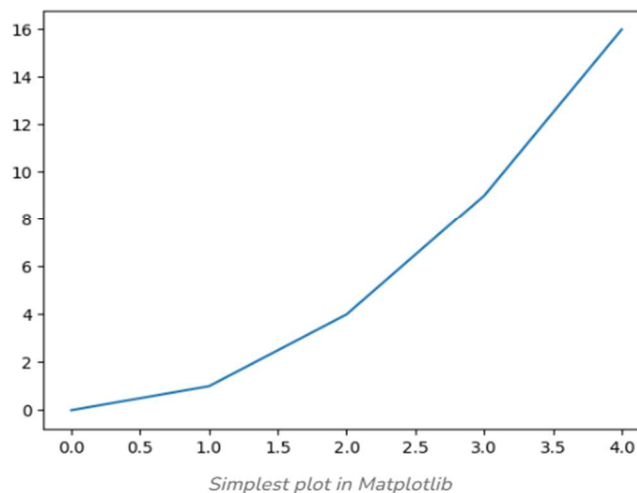
Topic: * Introduction to Matplotlib

- Learned to create simple line plots.
- Example: Plotted $y = x^2$ for x in range 0 to 10.

Matplotlib is a powerful and versatile open-source plotting library for Python, designed to help users visualize data in a variety of formats. Developed by John D. Hunter in 2003, it enables users to graphically represent data, facilitating easier analysis and understanding. **If you want to convert your boring data into interactive plots and graphs, Matplotlib is the tool for you.**

```
1 import matplotlib.pyplot as plt
2
3 x = [0, 1, 2, 3, 4]
4 y = [0, 1, 4, 9, 16]
5
6 plt.plot(x, y)
7 plt.show()
```

it:



- **Import Matplotlib:** Start by importing matplotlib.pyplot as plt.
- **Create Data:** Prepare your data in the form of lists or arrays.
- **Plot Data:** Use plt.plot() to create the plot.
- **Customize Plot:** Add titles, labels, and other elements using methods like plt.title(), plt.xlabel(), and plt.ylabel().
- **Display Plot:** Use plt.show() to display the plot.