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Python Libraries

Library #1: matplotlib.pyplot

Matplotlib is a python library used for data visualization and is used for creating different types of plots from data. It makes use of NumPy library which deals with numerical mathematics. Matplotlib is object-oriented, and recommended if you need to manipulate and customize plots. Matplotlib.pyplot is a sub module to matplotlib that offers MATLAB-like ways of plotting and is generally used for inactive plots. Each function of Pylot makes some type of modification to a figure. For example, functions can include: creating a plot, altering the size of a plot, adding labels, legends, altering axis's, etc.

Matplotlib.pyplot has many practical uses, as it allows the user to create a large variety of plots from any type of numerical data. In the business world, it can be used to visual finances by creating plots and graphs to track spending. Marking companies can use the library to analyze trends in the market and utilize that information to predict future outcomes. An interesting way it can be used is just to visually explain a series of data to someone who may not understand that numbers. Having the ability to showcase data on another platform allows for the data to be accessed by more people. People no longer need to be able to analyze the numbers to see the impact of the results.

Some functions of matplotlib.pyplot:

Documentation: https://matplotlib.org/3.1.0/api/_as_gen/matplotlib.pyplot.html#module-matplotlib.pyplot

- bar(x, height[, width, bottom, align, data]) : Makes a bar plot that accepts data(x) and size specifications(height, etc.) as parameters
- show() : Once the program runs this function produces the image of the figure you were manipulating with previous functions
- subplot(*args, **kwargs) : Adds a subplot to the current figure. This allows you to see multiple figures in one image.
- subplots_adjust([left, bottom, right, top, ...]) : Adjusts the configurations of the subplot layout
- xlabel(xlabel[, fontdict, labelpad]): To set the label of the x-axis
- ylabel(ylabel[, fontdict, labelpad]): To set the label of the y-axis