

Plottings:

Types of Data:

- 1> Numerical Data: All numerical metrics.
eg: Age, weight.
- 2> Categorical Data: Groups.
eg: Gender, Brand.

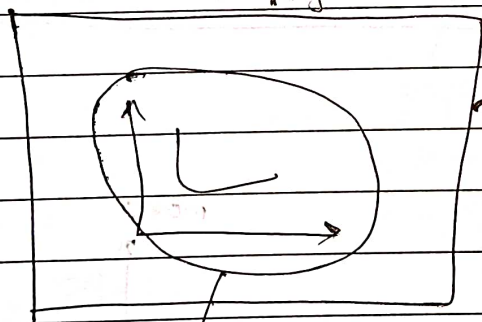
This will help you to determine which graph to use for which kind of data.

Working with single col/variable. → Univariate.
two cols/variable → Bivariate.
multiple cols/variable → Multivariate.

Whenever we plot graph in matplotlib we have 2 object.

fig, axes

fig.



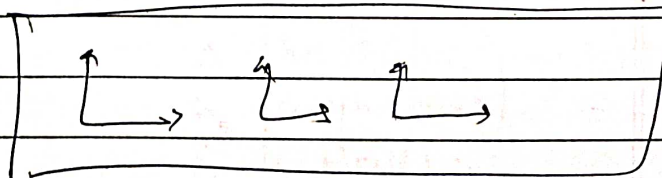
container: in which plots will be present.

Is container ko bolte hai figure.

iste andar jo plot hai ye hota hai axes.

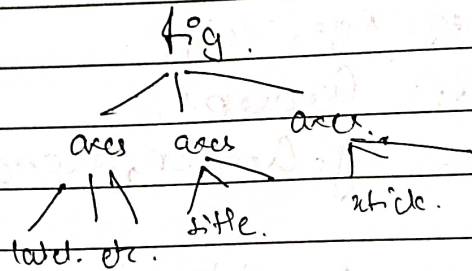
1 figure

so matplotlib mai.



3 axes. bhi ho sakta hai

In short: matplotlib mai hierarchy aisa hai.



On the other hand:

Seaborn mai there are 2 levels.

→ fig level.

→ axes level.

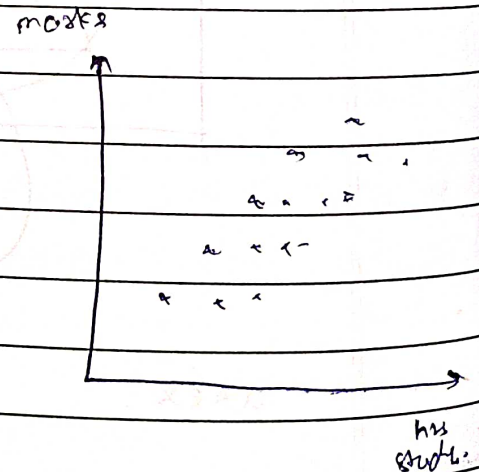
Same plot can be drawn using both but each has their own advantages & disadvantages.

Regression Plot:

Suppose.

(hrs) study	mark.
80	6.5
100	7.1
20	8.1
30	5.

we can plot this data.



After look at the graph we can say that there is a relationship between hours of study & marks. But hamare pass pakka formula nahi hai.
 & kitne hrs padhe se kitne marks aayenge.

Thus Linear Regression helps to get this formula.

- Dono entity ke bich ek aisa line banana jiska error ekdum kam ho aur jitha hosake utna dono entity the points se close ho.

- When any input is given we can predict the outcome through this formula.

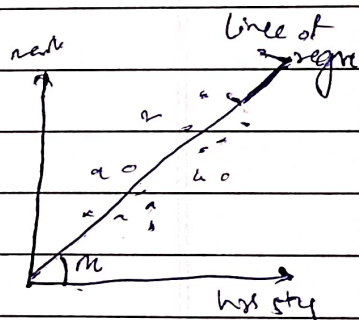
The linear regression gives the formula.

input \Rightarrow hours of study.

output \Rightarrow marks = $mx + b$.

slope
of
line

y intercept.



Pair Plot:

Automatically identify numerical columns of the data & apply scatter plot on each pair of plot.
 eg: 3 numeric values.

Same col will have histogram i.e diagonal elem.

	a	b	c	
a	his	scat	scat	— symmetric
b	scat	his	scat	
c	scat	scat	his	