Picture speaks lauder than thousand words .
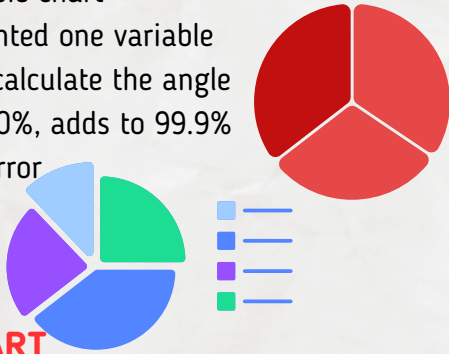
Nominal and Ordinal Data

1.Pie Chart

→Size of pie proportional to frequency, percentage of that variable.

→Disadvantage of pie chart

it can only represented one variable

→divide by 360 to calculate the angle

→Should add to 100%, adds to 99.9%

due to round-off error

2.THE BAR CHART

to represent data of the two subtypes of qualitative and quantitative discrete type.

*Horizontal, X :plotting the variable plotting the variable .

* Vertical, Y:plotting the frequency, Relative frequency or %

**THE BAR CHART

to represent data of the two subtypes of qualitative and quantitative discrete type.

*Horizontal, X :plotting the variable plotting the variable .

* Vertical, Y:plotting the frequency, Relative frequency or %

types

I. Simple bar chart used

-when we have one variable (sex of child)

II Clustered bar chart

Used when more than one variable

III Stacked bar chart

Used when more than one variable

Continuous Metric Variable by Histogram
+THE FREQUENCY POLYGON:

This type is used when the variable is of continuous quantitative

THE LINE GRAPH

• This type is specifically used when we are dealing with a

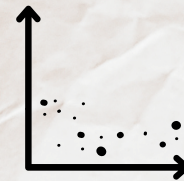certain observation that varies according to time.

• Usually the time variable is put on the horizontal axis (X-axis)

and the other variable is put on the vertical axis (Y-axis),
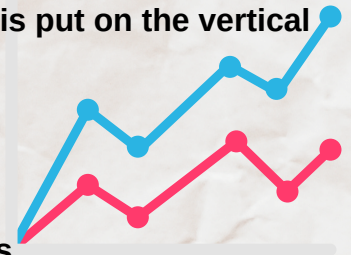
Dotplot

• Number line with dots representing data points

• Can visualize the "spread" of the data

~~~Title should contain :

what kind of data is this .

who were involved .

where it was collected .

when it was done .

HIGH YEILD

Measures of central tendencies (Location) .

A value around which the data has a tendency to congregate (come together)or cluster

The central value as representative value in a set of data

.Mode (Mo)

Most frequently occurring value in a set of observation
Mode is the only measure of central tendency that can be
used for qualitative data
- is not practically useful with the metric continuous
Characteristics of Mode

-Requires no calculation just counting
- It may not exist (No Mode)
-It is not necessarily be unique there may be one mode unimodal
more than one mode in a set of data Bimodal, Tri modal ....
.

.Median (Md)

It is the middle value in ordered data (from the lowest to the highest values
Median is located the center of data by count
Odd No. we have just one median position .
Even No. we have two median position or
two median values
Median value =Average of the two values

$$\frac{n+1}{2} = \frac{5+1}{2} = 3^{rd}$$

- is always existed .
-It is always unique, there is one and only one Md .
-It is not affected by two extremes, not sensitive by two extremities .

- Not affected by skewness in the distribution

-Not affected by presence of outliers
-It is discard a lot of information

Mean
Arithmetic Mean

$$\overline{X} = \frac{\sum X}{N}$$

Σ = sigma = summation .
X = value of observation
N = No. of observation

- more commonly known as average
-it is an arithmetic average of a set of observation

- Relatively easy to handle
- It is always exist
- It is always unique,
there is one and only one Mean

-It takes into account every item in a set of data
-It uses all of the information in the data set.
- affected by skewness in the in the data set
- affected by presence of outliers
-it can not be used with the ordinal data
-It is affected by the two extremes by a very small or a very large value
-.it can not be used with the ordinal data
-this may produce a mean that is not very representative

Weighted mean
It is the average measure of a No. of means
It is used when some values of observation more important in some sense than others .
Choosing the most appropriate measure

$$W.mean = \frac{W_1\overline{X}_1 + W_2\overline{X}_2 + W_3\overline{X}_3 + \ldots\ldots\ldots + W_k\overline{X}_k}{W_1 + W_2 + W_3 + \ldots\ldots\ldots + W_k}$$

	Mode	Median	Mean
Nominal	Yes	No	No
Ordinal	Yes	Yes	No
Metric discrete	Yes	Yes if distribution is markedly skewed	yes
Metric continuous	No	Yes if distribution is markedly skewed	yes