

Statistical Description of Data

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1) Derived from Latin word - status

1) F-E - French - Statistique

2) I-A - Italian - Statista

3) G-K - German - Statistik

1) Primary data - information first time eg. survey

• Secondary data - " - collected + stored eg. Census report

→ Geographical, Temporal, Qualitative, Quantitative
Place or direction, Time, attribute, Age, numbers

→ Textual Data, Tabular, Diagrammatic → line diagram
↓ in words, ↓ in table, ↓ Bar diagram, Pie chart

• Line diagram shows quantitative data

Inf. Bar diagram shows qualitative data (horizontal, vertical)

✓ Imp. Pie chart used for H.E.P.N.O → Pictogram, non-dimensional,
means circle shows household exp., economic development.

• Dimensions - B - 1, P - 0, L - 2

Question from pie chart - what is diff. bet. large + small angle?

$$\angle A = \frac{(A-D) \text{ (assumed)}}{(A+B+C+D)} \times 360^\circ$$

Imp. Frequency distribution -

→ inclusive - LCL, UCL

→ exclusive LCB, UCB (kinare wali boundary set kar ni sakte)

Imp. Mid value or class marks = $\frac{LCL+UCL}{2}$ or $\frac{LCB+UCB}{2}$

Imp. Width $UCB - LCB$ (width only exclusive ki width)

multiple line chart - 3 applied for - two or more related time series when the variables are expressed in same unit.

Graphical representation of data (frequency distribution)

Imp 1

Histogram - gives frequency & class boundaries

MOH → Histogram se mode nikalta h
 these condition only when class intervals are equal.

2

Frequency polygon - straight line → Frequency curve free hand

3

Ogive - made from Cumulative frequency

(demo) → ogive se median nikalta h

Q, O, D, P, Md → ye sab kuch deta h

- Ogive me kitne type ke curve hote h → 2 (less than / more than)
- do curve jaha pe ogive meet karate husko median bolte h
- Ogive ka shape - 'S' shaped curve

→

Types of variable 1) discrete variable eg. countable, non decimal

2) continuous variable eg. noncountable, decimal

income → discrete or continuous ~~is~~ dono ho sakta h

agar countable to discrete, agar range 0-lakh hogi to continuous

•

Frequency density ⇒ $\frac{\text{Frequency of class}}{\text{width of class}}$

•

Relative frequency ⇒ $\frac{\text{Frequency of class}}{\text{Total Frequency}}$

(exam me)
 que. dedega
 EK ungrouped
 data or bolega
 5 class width
 jese class
 banao

•

No. of class interval ⇒ $\frac{x_{\text{max}} - x_{\text{min}}}{\text{class width}}$

Imp

→

No. of class interval by Sturge's Rule = $1 + 3.3 \log N$
 $N = \sum N$

Imp

→

Row means stub (horizontal) it means left part of table describing Row

→

Column means column (vertical) it means upper part of a table that describes the column and sub column

Logarithm ko use karne wale ko ratio chart bolte h

→

Tabulation - The upper part of table that describes the column and sub column