

Statistics

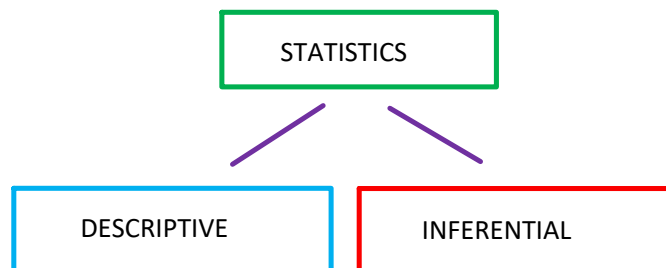
Friday, 23 December 2022

1:36 AM

Statistics

It's a mathematical study of collection, interpretation, visualization and organization of data. With the help of statistical models we find relationship, pattern and trends of data

Two types of Statistics:-



Descriptive Statistics

Branch of statistics that summarize organizing, summarizing and describing data

Inferential Statistics

Branch of statistics that predicts or estimates data about population on sample data

Descriptive Statistics

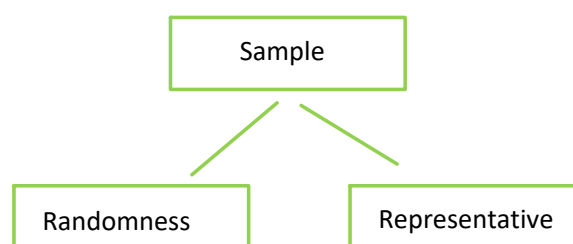
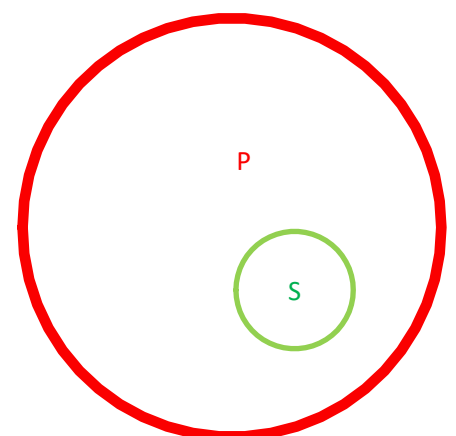
Data Kinds

Population:-

- Collection of all items of study
- Numbers obtained here are called as **Parameters**
- Hard to define and observe in real life, not the most efficient way

Sample:-

- It is a subset of population
- Numbers obtained here are referred as **Statistics**
- Cost friendly, time efficient and easy to observe in real life



Strictly by Chance

Reflects accurately a certain group

Types of Data

Numerical:-

It deals with Numbers

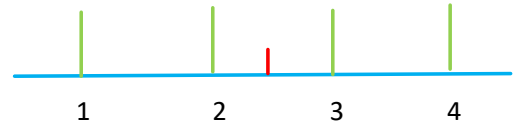
Discrete

When the data is finite
Kids your are having, amount sweets you consumed? No of balls?



Continuous

When the Data is infinite
Weight? Height?



Weight -> 2.0kg? ->2.01152->2.00001

Categorical:-

Which belongs to a specific category



Audi



Mercedes

A B C D E F Grades

Measurement

Quantitative:-

Intervals:

Doesn't have a true **zero**



Ratios:

Have a true **zero**



Is $0^{\circ}C$ same as $0^{\circ}F$?

No

Is 0km same as 0m ?

$$\frac{500m}{0.5km} = 1000:1$$

$$\frac{2500m}{2.5km} = 1000:1$$

Qualitative:-

Nominal:

It belongs to a category

Ordinal:

Categories/groups that follow strict order



A B C D E F Grades

Itself grades also describe a certain measurement