**Statistics Assignment 1**

1. What exactly is the difference between descriptive and inferential statistics?

Ans:- The difference between descriptive and inferential statistics is given below:-

Descriptive statistics is a kind of statistics where the analysis of the data show how to describe, show, and summarize that in a meaning way to understand. It is mainly focus mean, median, mode, distribution, standard deviation and corelation part. This is first part to determine the nature of the data.

Inferential statistics are the techniques that allow us to get sample data from population data and interpret that data to get a conclusion of that data. It includes sampling, estimation and hypothesis testing.

1. I'm not sure what is the difference between a sample and a population?

Ans:- The difference between a sample and a population as below:-

population is the entire set of items from which you draw data for a statistical study. It can be a group of individuals, a set of items, etc. It makes up the data pool for a study.

A sample represents the group of interest from the population, which you will use to represent the data. The sample is an unbiased subset of the population that best represents the whole data.

1. What distinguishes descriptive statistics from other types of statistics?

Ans:- Descriptive statistics is different from other types of statistics like inferential statistics, predictive statistics and prescriptive statistics. Descriptive statistics is related to central tendency and variance of the data to create table, graph etc. Whereas inferential statistics is related to sampling, hypothesis testing. Predictive statistics is related to prediction of future outcome by determining the past data. Prescriptive statistics focus mainly on suggestions, advice and providing recommendation based on data analysis. So descriptive statistics is the first stage of statistics and help next to analysis for next level statistics.

1. What is the difference between quantitative and qualitative data?

Ans:- The difference between quantitative and qualitative data is as belows:-

The data collected on the grounds of the numerical variables are quantitative data. Quantitative data are more objective and conclusive in nature. It measures the values and is expressed in numbers. It express in numbers or it has count value.

The data collected on grounds of categorical variables are qualitative data. Qualitative data are more descriptive and conceptual in nature. It measures the data on basis of the type of data, collection, or category. The data collection is based on what type of quality is given

1. What is the definition of a percentile?

Ans:- In statistics, percentiles are used to understand and interpret data. The nth percentile of a set of data is the value at which n percent of the data is below it. In everyday life, percentiles are used to understand values such as test scores, health indicators, and other measurements.