**Statistics Assignment 1**

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

Answer: Descriptive statistics describes the summary of the population/data. i.e. it gives the information about the central tendency of the data and quartiles,

While the inferential statistics is used to draw the conclusion about the population based on some analysis on samples of the same population.

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

Answer: A population is the group of large similar items/objects which is under consideration for an experiment. E.g. If we want to measure the average height of the people of a country. Then here the people of the country will be referred to as the population.

Sample is the subset of the population which is drawn to verify some assumptions about the population. It is actually the representative of the population. E.g. measuring the average height of the entire population is not feasible and practically possible so we consider the sample/portion of population that contains the sufficient amount of data of which we can then calculate the avg height and then we will extrapolate the results of this sample to our population.

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

Answer: descriptive statistics focuses on describing the visible characteristics of a dataset (a population or sample). Meanwhile, inferential statistics focus on making predictions or generalizations about a larger dataset, based on a sample of those data

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

Answer: Quantitative data refers to the data that can be quantified, that can be measured and can be expressed numerically. Basically, numerical data is referred to as the quantitative data. Which describes the quantity in numbers. E.g. Height of the people in a particular group, or salary etc.

While the qualitative data describes the quality of the data. It can be approximated but can not be computed. E.g. the colour of an object.

5. What is the definition of a percentile?

Answer: Given a range of numbers. If we divide this range into 100 equal parts. Then each part corresponds to a percentile. E.g. if we say the score is 86th percentile, then below this 86 percentage of the data falls. Percentile is the value below which percentage of data falls.