ASSIGNMENT 1

1.What is the difference between data analysis and machine learning?

* Analytics relies on existing information to find patterns that ultimately shape decisions. Whereas machine learning leverages existing data that provides the base for the machine to learn for itself.
* Analytics reveals patterns through the process of classification and analysis while ML uses the algorithms to do the same as analytics but in addition, learns from the collected data.
* Data analytics ultimately aims to find patterns whereas ML aims to learn from data and make estimates and predictions.

2. What is big data?

**Big Data** is a collection of data that is huge in volume, yet growing exponentially with time. It is a data with so large size and complexity that none of traditional data management tools can store it or process it efficiently. Big data is also a data but with huge size.

Big data is categorized by five V’s: **volume, value, variety, velocity, and veracity**.

3.What are the four main things we should know before studying data analysis?

## 1. You have to like working with numbers. 2. You have to know how to code, but you don't have to know computer science. 3.  Communication skills are (almost) as important as math. 4. Much of what you'll do won't be at the top of the job description.

## 4.Most common characteristics used in descriptive statistics?

## 1. Measures of central tendency , 2.Measures of dispersion , 3. Skewness

## 5. What is quantitative data and qualitative data?

## 

|  |  |
| --- | --- |
| Quantitative data | Qualitative data |
| These are measures of values or counts.They are information about quantities. | These are measures of types like name, symbol, etc...They are information about qualities. |
| They are two types: Discrete and Continuous | They are two types: Nominal and Ordinal |