**Scales**:

Difference between values that may look equally apart but sometimes are not actually for example difference between A and A- vs A- and B+ look same but it may not be especially when converting to percentage scale.

As a data scientist there are at least 4 different scales worth knowing about.

# Ratio Scale:

* Units are equally spaced.
* Mathematical Operations of +-/\* are all valid.
* Examples are height and weight.

# Interval Scale:

* Units are equally spaced.
* But there is no true zero.
* So, Operations such as Multiplications and Divisions are not valid.
* Examples are Temperature and directions on a compass where 0 mean something.

# Ordinal Scale:

* Order of units is important.
* Units are not evenly spaced.
* Letter grades such as A+, A, A-, B+ are a good example (Where from B+ to A- may be 4% but B to B+ may be 3%).
* Ordinal Data is very common in Machine Learning and therefore is very important to understand.

# Nominal Scale:

* Categories of data.
* Categories have no order with respect to one another.
* E.g., Teams of sport.
* Applying Mathematical functions to them or Ordering them might be meaningless.