Statistics

Population vs Sample

Population	Sample
It includes all subjects possessing a common characteristic that is being studied.	It is a subset of population.
Parameters	Statistics
Represented using Greek letters (mu, sigma)	Represented using Roman letters (x, s)
Usually large and almost impossible to collect data for each object.	Usually small.

We compute Statistics, and use them to estimate parameters. The computation is the first part of Statistics (Descriptive Statistics), and the estimation is the second part (Inferential Statistics).

Levels of Measurement

- There are 4 type of Levels: *Nominal, Ordinal, Interval, Ratio* levels.
- Data is classified according to the highest level which it fits.
- *Nominal* is the lowest levels. Only names are meaningful here.
- *Ordinal* adds an order to the names.
- *Interval* adds meaningful differences.
- *Ratio* adds a zero so that ratios are meaningful.

Types of Sampling

There are 5 types of Sampling:

- *Random Sampling*
- *Systematic Sampling*
- *Convenience Sampling*
- *Cluster Sampling*
- *Stratified Sampling*