SESSION 1 OF

STATISTICS FOR BUSINESS

DR. SURESH KUMAR GADI
UNIVERSIDAD DE LAS AMÉRICAS PUEBLA

ABOUT THE COURSE

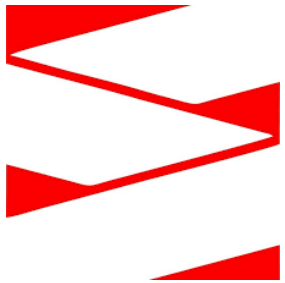
- Class duration: **10 sessions** with each one approximately **2 hours** long
- Objective is to learn to **take decisions** based on **research data**
- **Interactive** sessions are preferred
- When encountered with doubt(s), students are requested to **raise hand immediately**

ABOUT MYSELF

- Name: Suresh Kumar Gadi
- Education:
  - PHD in Automatic Control
  - Masters in Sensor Systems Technology
  - Bachelors in Electrical Engineering
- Work experience: Larsen and Toubro, Schlumberger, Honeywell, Industria Sigrama
- Teaching experience: Instituto Politécnico Nacional, Universidad Autónoma de Coahuila, Universidad Politécnica de Aguascalientes

Schlumberger

Honeywell



PLEASE TELL ME ABOUT YOURSELF

Name

Program

Current professional affiliation

Ever used statistics?

How good are you with software? Did you use Excel, MatLab, Python, or any other software.

DATA AND INFORMATION

What is data?

What is information?

LEVELS OF MEASUREMENT

Nominal	Named variables
Ordinal	Named and ordered
Interval	Named, ordered, and proportionate interval between variables
Ratio	Named, ordered, proportionate interval between variables, and contains absolute zero

DESCRIPTIVE STATISTICS

Analyzing and presenting data

Analytical and graphical method

EXAMPLE: DATA COLLECTION

Marks awarded to students in a classroom are 6, 7, 5, 7, 7, 8, 7, 6, 9, 7, 4, 10, 6, 8, 8, 9, 5, 6, 4, and 8.

MEASURES OF CENTRAL TENDENCY

Mean

Median

Mode

MEAN

Mean ($\bar{x}$) is defined as

$$\bar{x} = \frac{\sum x_i}{n}$$

where x_i is each data element and n is the total number of data elements.

MEDIAN

Organize the data elements in an order

The middle element is the Median

If we have two elements in the middle, median is the athematic mean of those two middle elements

MODE

The data element that occur at highest frequency

It is possible to have several modes for a data.

DATA MEASUREMENT

Offers:	Nominal	Ordinal	Interval	Ratio
The sequence of variables is established	–	Yes	Yes	Yes
Mode	Yes	Yes	Yes	Yes
Median	–	Yes	Yes	Yes
Mean	–	–	Yes	Yes
Difference between variables can be evaluated	–	–	Yes	Yes
Addition and Subtraction of variables	–	–	Yes	Yes
Multiplication and Division of variables	–	–	–	Yes
Absolute zero	–	–	–	Yes

Source:
https://www.questionpro.com/blog/nominal-ordinal-interval-ratio/

Let us solve this right now!

EXAMPLE

Marks obtained by students in a classroom are 6, 7, 5, 7, 7, 8, 7, 6, 9, 7, 4, 10, 6, 8, 8, 9, 5, 6, 4, and 8.

Calculate

1. Mean
2. Median
3. Mode

DO YOU SEE THE NEED?

VISUALIZING

ORGANIZING THE DATA