Definition: Stadistics is the science of collection, organizing and analyzing data.

$\downarrow$

decision making

DATA:

"Facts or pieces of information" => Measured, colleted, analyzed

Example: weights of students in the class

{60kg, 50kg 45 kg, 30kg, ... }

IQ of the students in class:
{100, 90, 95, 99, ...}

House price dataset:

Area	Number of rooms	Price	City
100	2	10	Atlixco
1250	3	15	Puebla
1350	4	15	Puebla

Analyzing this data

Data scientist → Model
$\downarrow$
Price

Data Analyst → Report
Visualization
$\downarrow$
Meaning Decisions   Project

Applications

1) Data exploration and summarize

2) Model Building and validation

3) Statistical Analysis => sample data => Population data

4) Hypothesis Testing

5) Optimization and efficiency

6) Reporting