DATA ANALYSIS

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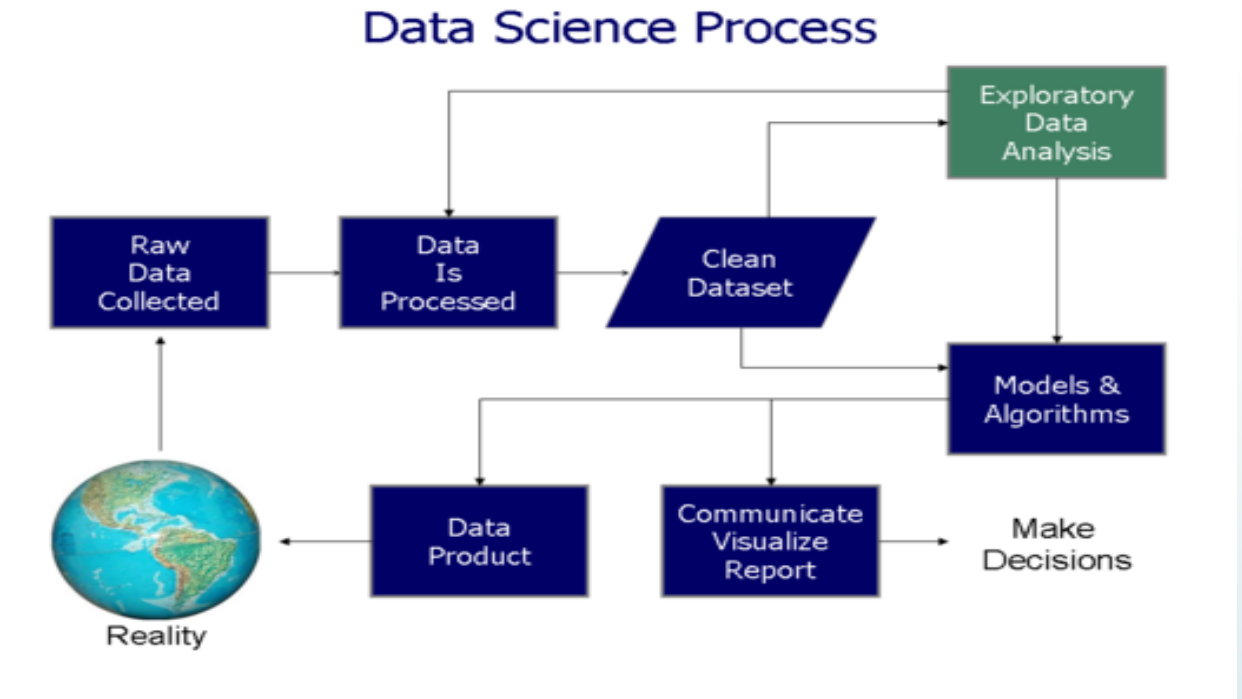
DEFINITION



Data analysis is a process of inspecting, cleansing transforming and modeling data with the goal of **discovering useful information**, informing conclusions and supporting decision-making.

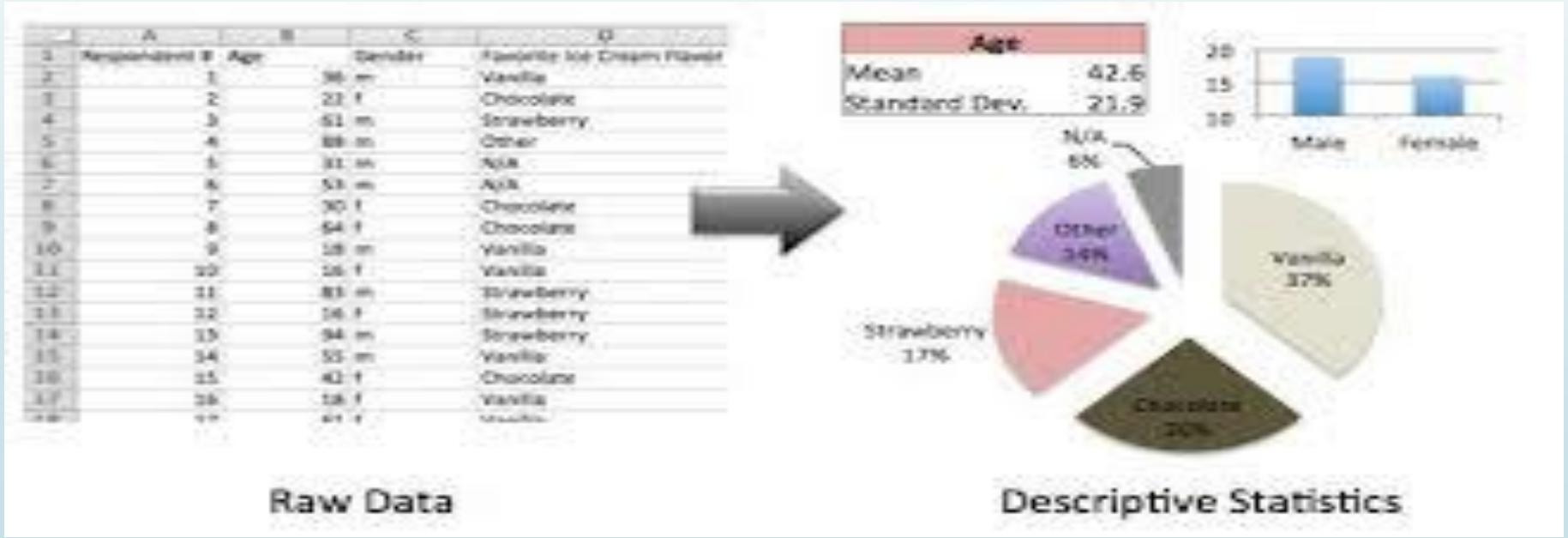
TYPES OF DATA ANALYSIS

- DESCRIPTIVE ANALYSIS
- DIAGNOSTIC ANALYSIS
- PREDICTIVE ANALYSIS
- PRESCRIPTIVE ANALYSIS

DESCRIPTIVE ANALYSIS

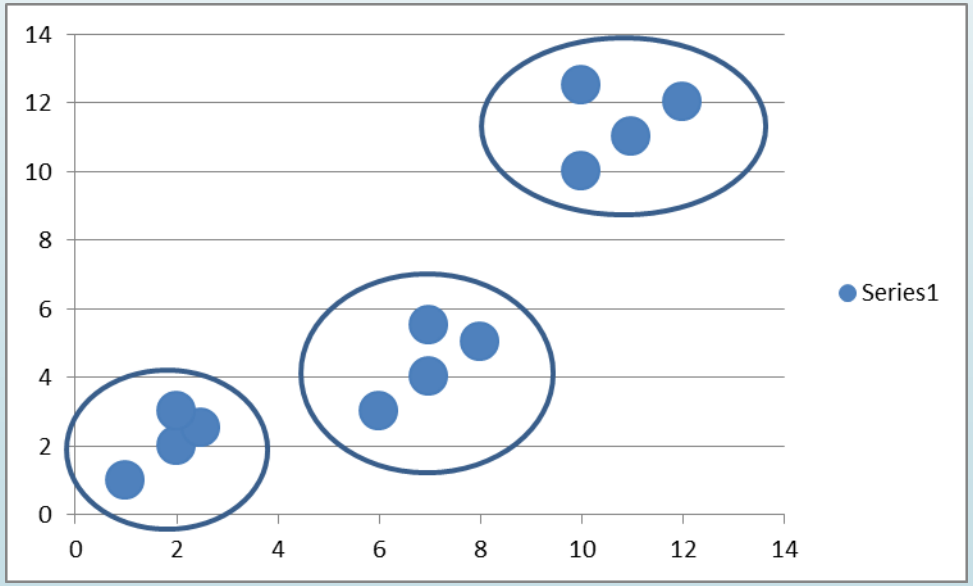
Descriptive analysis is the term given to the analysis of data that helps describe, **show or summarize data in a meaningful way** such that, patterns might emerge from the data. They are simply a way to describe our data.

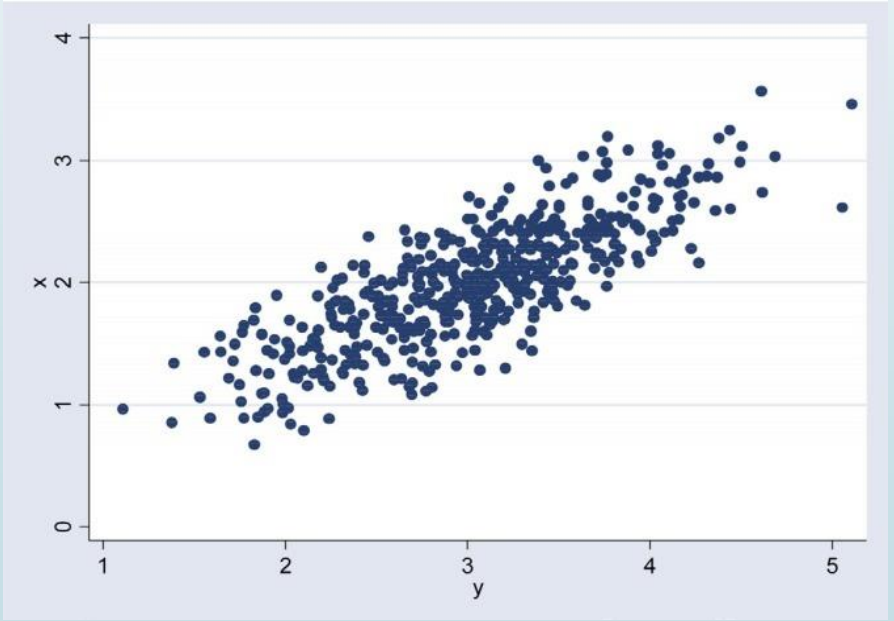
It can be done using various types of graphs,charts etc.



DIAGNOSTIC ANALYSIS

Diagnostic analytics is a form of advance analytics which examines data or content to answer the question **"Why did it happen?"**, and is characterized by techniques such as drill-down, data discovery, **data mining** and **correlations**. Diagnostic analytics takes a deeper look at data to attempt to understand the causes of events and behaviors.

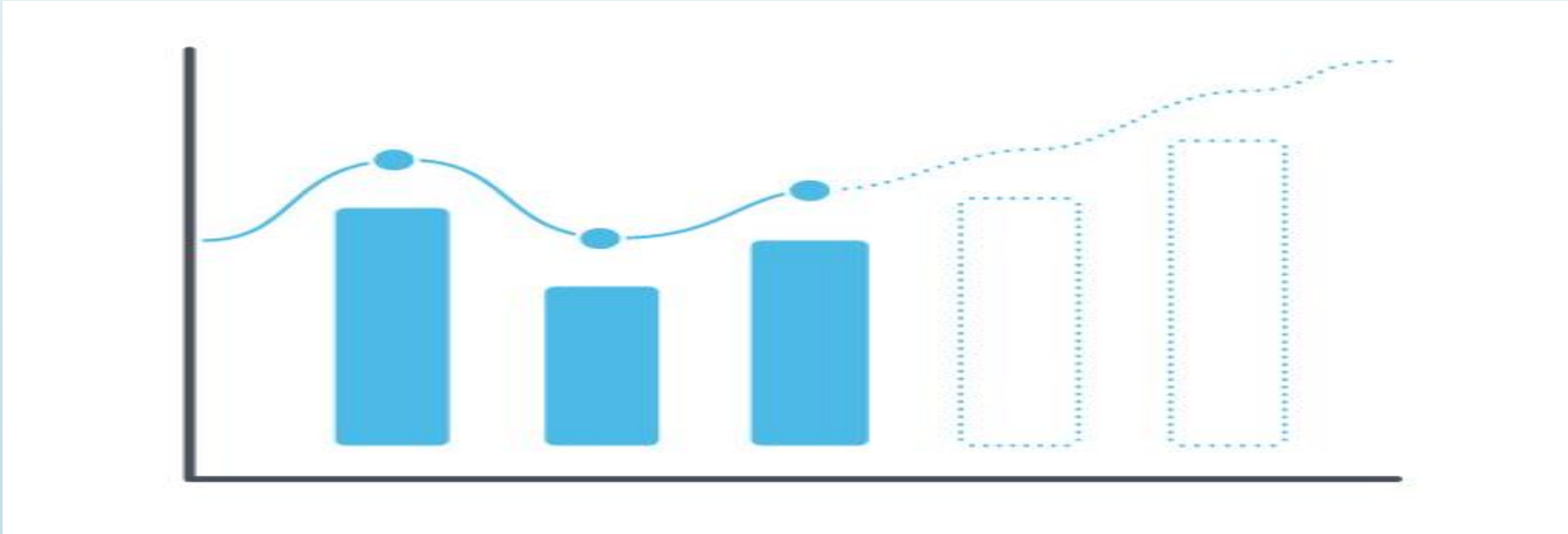




PREDICTIVE ANALYSIS

Predictive analysis attempts to answer the question **“what is likely to happen”.** This type of analytics utilizes previous data to make predictions about future outcomes.

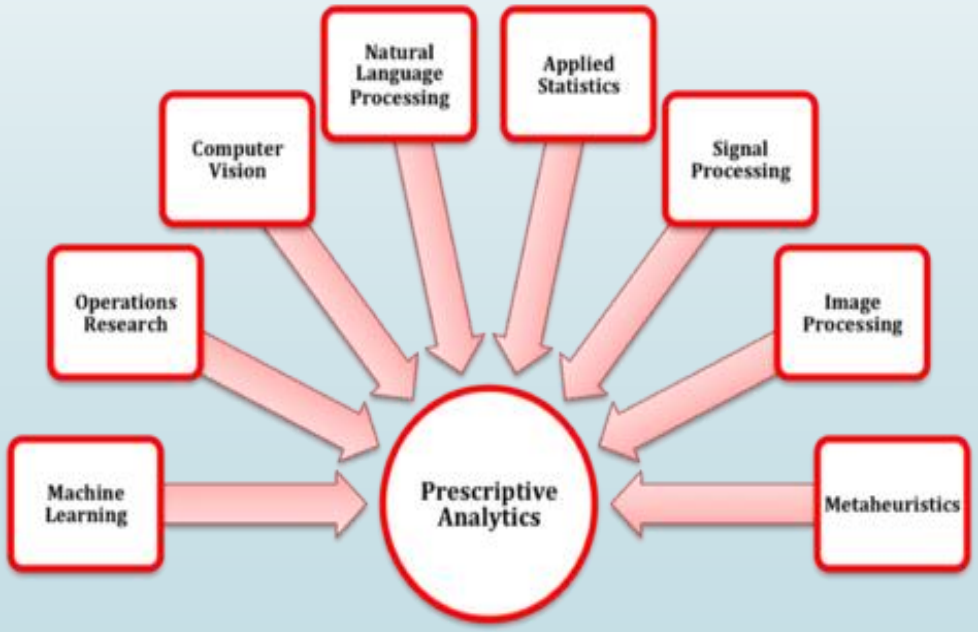
Predictive analysis uses the data we have summarized to make **logical predictions** of the outcomes of events. This analysis relies on statistical modeling, which requires added technology and manpower to forecast. It is also important to understand that forecasting is only an estimate; the accuracy of predictions relies on quality and detailed data.



PRESCRIPTIVE ANALYSIS

The final type of data analysis is the most sought after, but few organizations are truly equipped to perform it. Prescriptive analysis is the frontier of data analysis, **combining the insight from all previous analyses** to determine the course of action to take in a current problem or decision.

Prescriptive analysis utilizes state of the art technology and data practices. It is a huge organizational commitment and companies must be sure that they are ready and willing to put forth the effort and resources



APPLICATIONS

- Travel
- Healthcare
- Customer Interactions
- Internet/Web Search
- Digital Advertisement

DATA ANALYSIS TOOLS

- Excel
- R
- PYTHON
- SQL

…… and some other

CONCLUSION

Data analytics is expected to radically change the way we live and do business in the future. Already today we use the analytics in our technology devices, for many decisions in our lives. Not only how to drive from A to B and avoid traffic-jams, but also to identify waste in business processes with the help of Lean six sigma optimization projects.

Although organizations are taking steps to turn data into insights, our global survey showed that organizations are still struggling with data quality and the problem to find the right resources to turn these insights into true value and become more data-driven.

Expectations are that data analytics will make the impossible possible, but we are still in the early stages of the data era. Basically, every company is currently investing in data analytics capabilities to keep up with known or unknown developments and competition

THANK YOU