Introduction to data Analytics

By Dr Shaik A Qadeer

Professor MJCET

Content

- Intro to data analytics
- Data analytics life cycle
- Discovery
- Data preparation
- Model planning
- Model building implementation
- Communicate Result(Documentation)
- Operationalize(Quality Assurance)

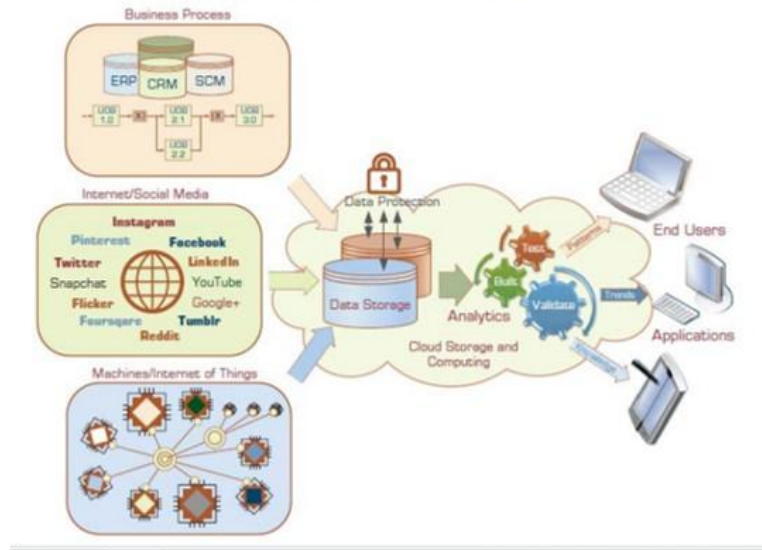# Introduction to data analytics: Data and their nature

- Data: a collection of facts(usually obtained as the result of **experiences**, **observations**, or **experiments**)

- Data may consist of **numbers, words, images**

- Data is the lowest level of abstraction in analytics

- Data is the source for information and knowledge

- Data quality and data integrity → critical to analytics

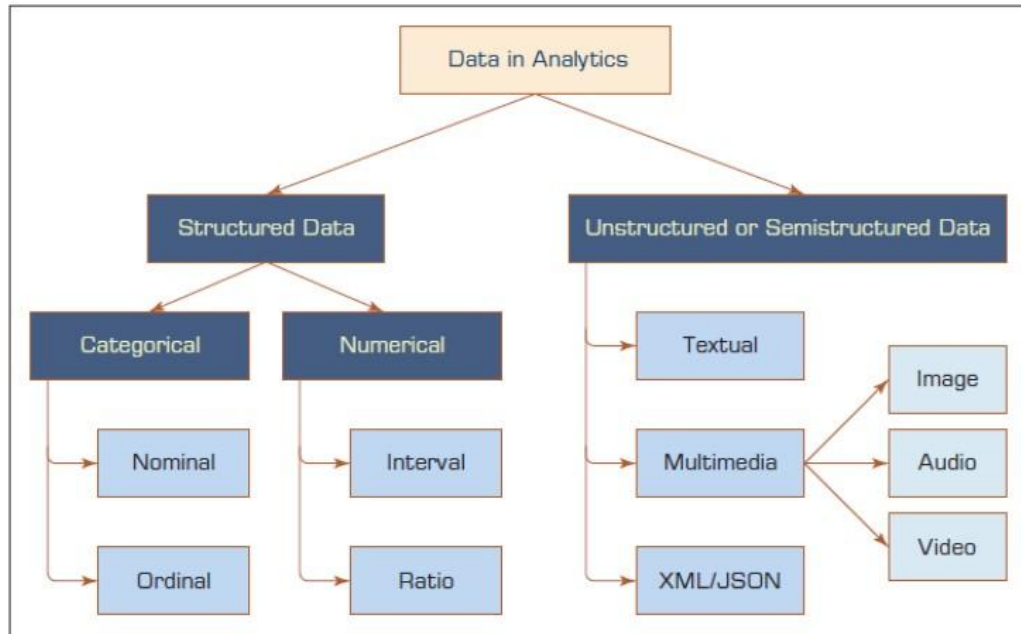# Introduction to data analytics: Data and their nature

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Introduction to data analytics: Data and their nature..

The Nature of Data (2 of 2)

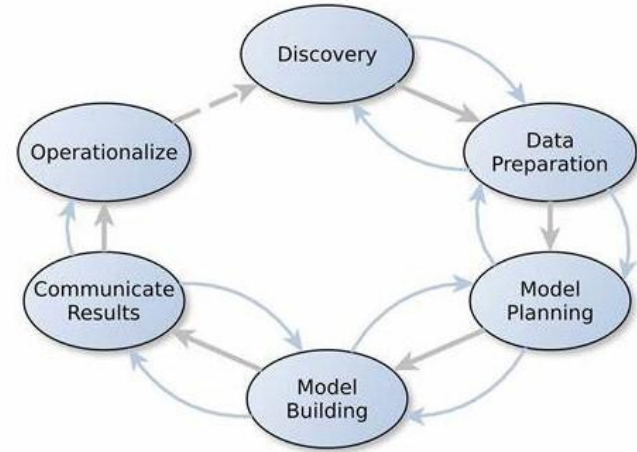# Introduction to data analytics: Data Taxonomy

Introduction to data analytics

- **Data analytics** is the process of collecting, transforming, and organizing data to make informed decisions. It involves analyzing raw data to draw conclusions and predictions, ultimately driving better decision-making.

- Data analytics=Data discovery+Data analysis(extracts meaning from data)+data science (using data to theorise and forecast) + data engineering (building data systems).

Data analytics life cycle

- Figure shows the life cycle diagram: Data Discovery to model deployment
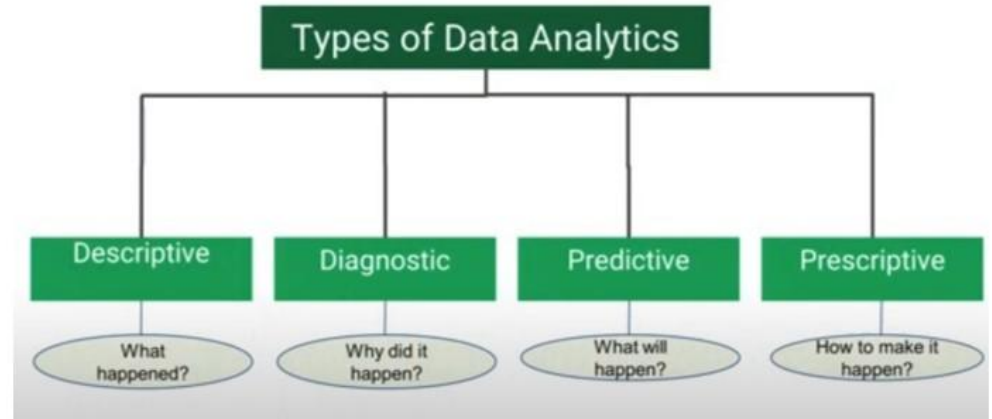
Data analytics life cycle

It can mapped to this 4 types of data
analytics:
Descriptive->Data discovery,
 Diagnostic->data preparation,
Predictive->model planning +
    model development
Prescriptive ->Communicate result
    operationalize

Data analytics life cycle: A case study

Prepared by Dr Shaik Abdul Qadeer