

Introduction to data Analytics

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Content

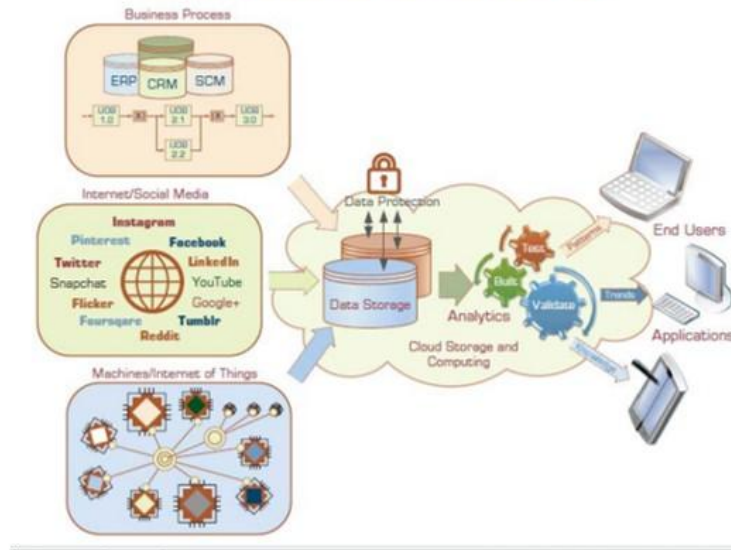
- Intro to data analytics
- Data analytics life cycle
- Discovery
- Data preparation
- Model planning
- Model building implementation
- Communicate Result(Documentation)
- Operationalize(Quality Assurance)

Introduction to data analytics: Data and their nature

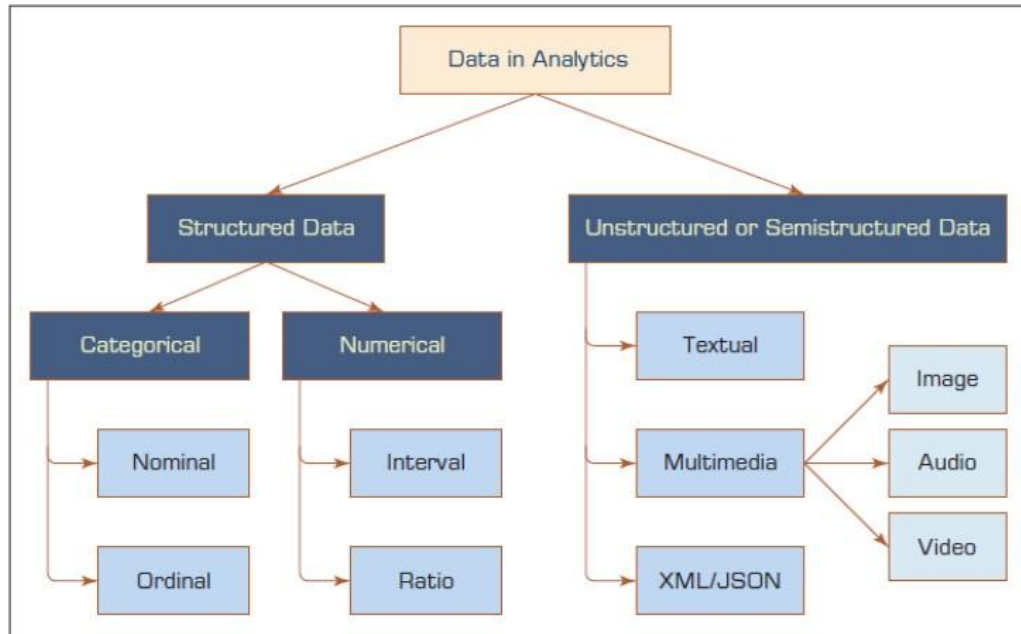
- Data: a collection of facts(usually obtained as the result of **experiences, observations, or experiments**)
- Data may consist of **numbers, words, images**
- Data is the lowest level of abstraction in analytics
- Data is the source for information and knowledge
- Data quality and data integrity → critical to analytics

Introduction to data analytics: Data and their nature..

The Nature of Data (2 of 2)



Introduction to data analytics: Data Taxonomy

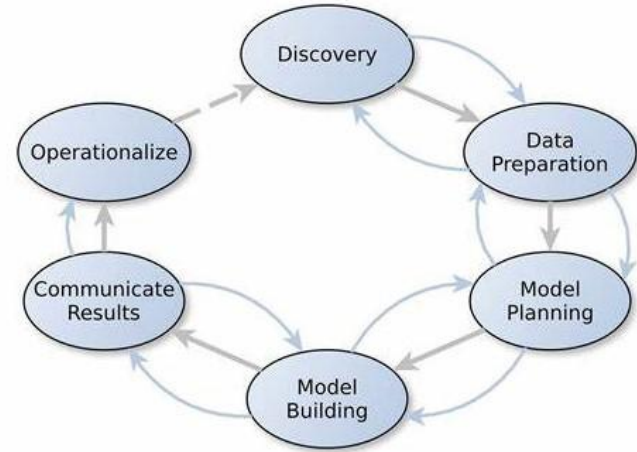


Introduction to data analytics

- **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

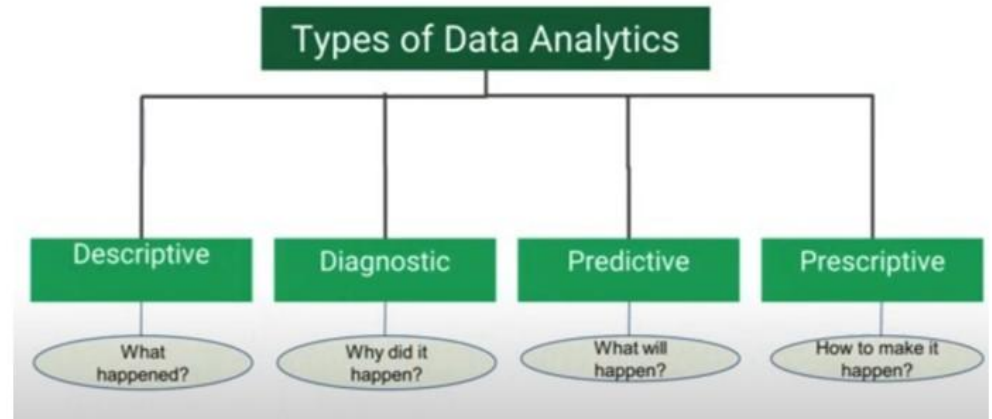
It can mapped to this 4 types of data analytics:

Descriptive->Data discovery,

Diagnostic->data preparation,

Predictive->model planning +
model development

Prescriptive ->Communicate result
operationalize



Data analytics life cycle: A case study

