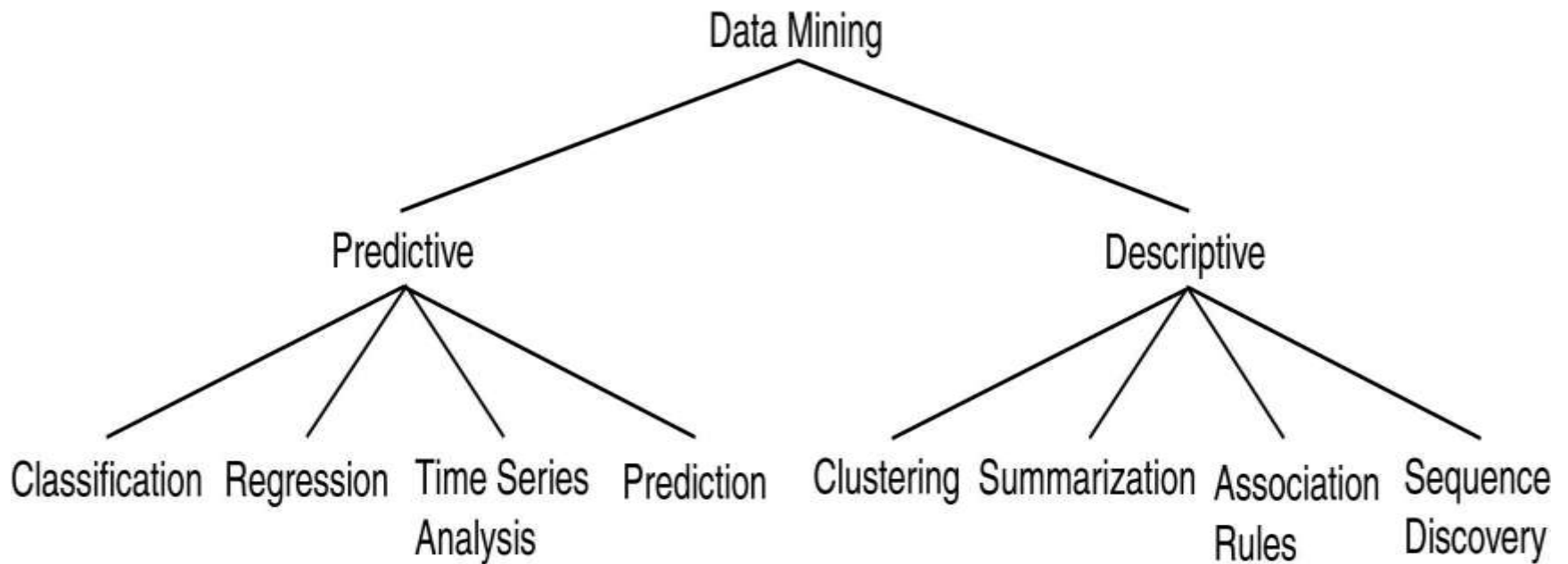# DATA MINING TASKS

KHWAJA AAMER

DATA MINING

The process of collecting, searching through, and analyzing a large amount of data in a database, as to discover patterns or relationships

▸ extraction of useful patterns from data sources, e.g., databases, data warehouses, web.
▸ Patterns must be valid, novel, potentially useful, understandable.

Why data mining???

- Data is growing at a phenomenal rate n Users expect more sophisticated information
- Traditional techniques are infeasible for raw data
- Human analysts may take weeks to discover useful information
- Much of the data is never analyzed at all

Data Mining Tasks

Predictive:-

It makes prediction about values of data using known results from different data or based on historical data.

Descriptive:-

It identifies patterns or relationship in data, it serves as a way to explore properties of data.

Classification

discovery of a function that classifies a data item into one of several predefined classes.
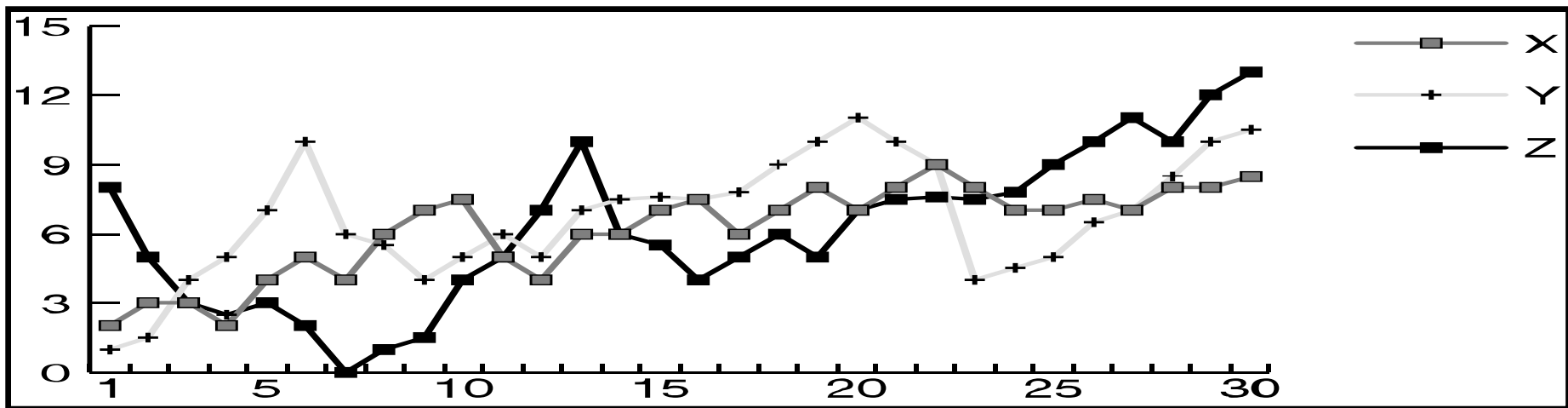- Given a collection of records

Each record contains a set of *attributes, one of the* attributes is the *class.*

Ex:-pattern recognition

Time series anlysis

- The value of attribute is examined as it varies over time
- A time series plot is used to visualize time series
- Ex:- stock exchange

Clustering

- Clustering is the task of segmenting a diverse group into a number of similar subgroups or clusters.
- Most similar data are grouped in clusters
- Ex:-Bank customer

Summarization

- Abstraction or generalization of data resulting in a smaller set which gives general overview of a data.
- alternatively , summary type information can be derived from data.

THANK YOU