Assignment

Data Warehousing and Data Mining

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Slot: D2+TD2

Applications of Data Mining

Data is set of discrete objects facts about an event or a process that have little use by themselve unless converted into information. we have been collecting numerous data from simple numerical measure-ments and text documents to more complex information such as spatial data, multimedia channels and hypertext documents.

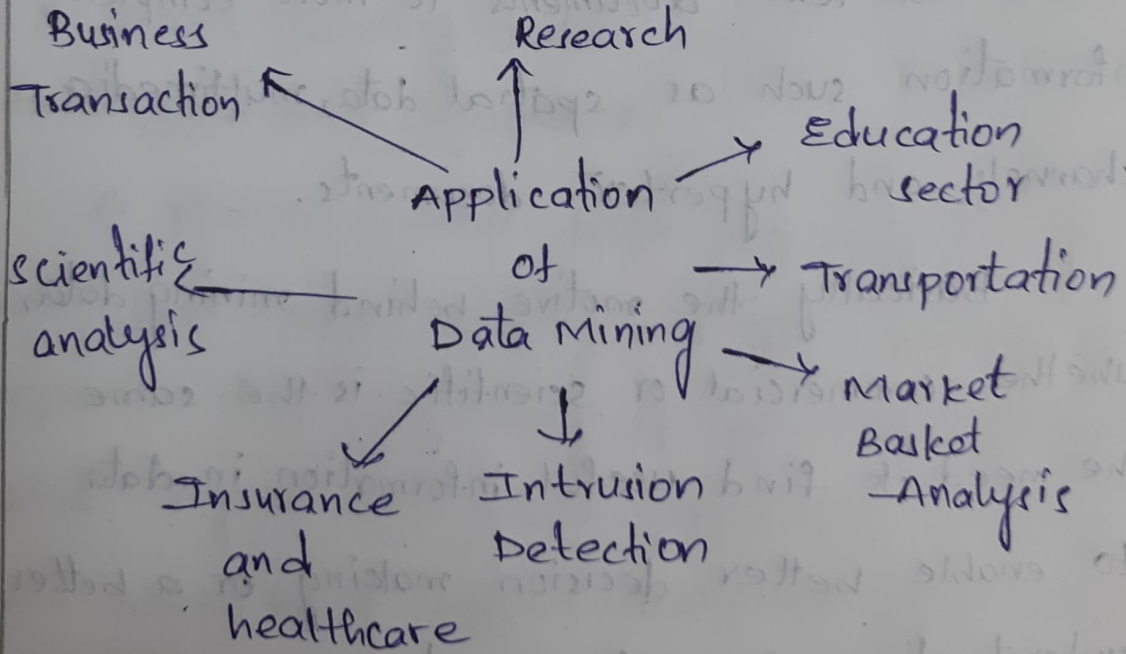
Basically the motive behind mining data, whether commercial or scientific is the same the need to find useful information in data to enable better decision making or a better understanding of world around us.

"Extraction of intresting information or Patterns from data in large data based is

known as "data mining."

Technically, data mining is computational process of analysing data from different perspectives, dimensions, angles and summarizing into meaningful information.

Data mining provides competetive advantage in knowledge economy. It does this by providing the maximum knowledge needed to rapidly make valuable business decisions despite the enoromous amounts of available data.



Intrusion detection:

Datamining techniques plays a vital role in searching intrusion detection, network attacks and anamolities. This datamining helps in selecting and refining useful and relevent information from large datasets.

Intrusion detection system generates alarm for network traffic in case of foreign invansion for example: 1. Detect security violations

2. Misuse detections
3. Anomaly detection

Business Transactions:

Every business industry is memorized for perpetuity such transactions are usually time-related and can be inter business or intra business deals. Data Mining helps to analyse these business transactions and identify marketing approaches and decision making.

Examples:

1. Direct mail targeting
2. stock trading
3. churn prediction.

Scientific Analysis:

Scientific simulations are generating bulks of data everyday. Datamining techniques are capable of analysis of these data.

Examples:

1. Sequence analysis in bioinformatics
2. classification of astronomical objects
3. Medical decision support.

Market Basket Analysis:

Data mining concepts are in use for sales and marketing to provide better customer service. customer retention in form of pattern identification and prediction of likely detections.

Education:

For Analyzing education sector, data mining uses education data mining method. By using Education data mining method we perform some educational task:

1. Prediction students admission in higher education.
2. Predicting student performance.
3. Predicting student profiling
4. curriculum development.

Research:

A datamining technique can perform, predictions, classification, clustering associations and grouping of data with perfection in research area rules generated by datamining are unique to find results.

Example:

1. classification of uncertain data
2. Information based clustering
3. Decision support system
4. web mining
5. Smart farming Iot.

Healthcare and Insurance:

A pharmaceutical sector can examine its new deal force activity and their outcome to improve the focusing of high value physicians and figure out which promoting activities will have best effect. Data mining can help to Predict which customers will buy new policies, identify behaviour patterns of risky customers.

1. claims analysis i.e. which medical procedures are claimed together.
2. Identify succesful medical therapies for different illness.

Transportation:

A diversified transportation company with large direct sales force can apply data mining to identify the best prospect for its service.

1. Determine the distribution schedules among outlets.
2. Analyse loading patterns.