

# Data mining 8519

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today's business world, information about the customer is a necessity for a businesses trying to maximize its profits. A new, and important, tool in gaining

this knowledge is Data Mining. Data Mining is a set of automated procedures used

to find previously unknown patterns and relationships in data. These patterns

and relationships, once extracted, can be used to make valid predictions about

the behavior of the customer. Data Mining is generally used for four main tasks:

(1) to improve the process of making new customers and retaining customers; (2)

to reduce fraud; (3) to identify internal wastefulness and deal with that

wastefulness in operations, and (4) to chart unexplored areas of the internet (Cavoukian).

The fulfillment of these tasks can be enhanced if appropriate data has been collected and if that data is stored in a data warehouse. This makes it much easier and more efficient to run queries over data that originally came from different sources." When data about an organization's practices is easier

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to access, it becomes more economical to mine. “ Without the pool of validated

and scrubbed data that a data warehouse provides, the data mining process requires considerable additional effort to pre-process the data” (SAS

Institute). There are several different types of models and algorithms used to

“ mine” the data. These include, but are not limited to, neural networks,

decision trees, rule induction, boosting, and genetic algorithms. Data Mining is

largely, if not entirely used for business purposes. The highest users of data

mining include banking, financial, and telecommunications industries (Two

Crows). Data mining will have a different effect on different industries in the

business world. The key to succeeding in this rapidly changing industry is to

understand the customer, or the market that the customer represents.

Through

data mining, companies can know what their customers have done in the past and

what they will do in the future. With this information, the companies will be in

ideal positions to make business decisions based on the information they have

gained from the data mining process.