Data Mining in the field of Agriculture Banking and Medical

Surya.k

P.G scholar, department of CSE,

Karpagam academy of higher education, Coimbatore-21,

Tamil Nadu, India.

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Abstract - *The main aim of the project is to bring out the applications of data mining over various fields such as agriculture, banking and medical. Generally data mining extracts the knowledge or data from large data set. There are many techniques available for mining data these different techniques include grouping, classification, predicting, finding relationship etc.., consider for any industry, hospital or in the field of higher education and agriculture there may be large database, retrieving the information in small data is easy in database, but extracting the information from large database leads to data mining. This paper focuses on the mining the data in the data in the field of agriculture, banking and medical because as for now day by day the growth of the information are getting grower so for the easy extraction data mining plays the major role.*

Key Words: classification, data mining, database, predicting, data set.
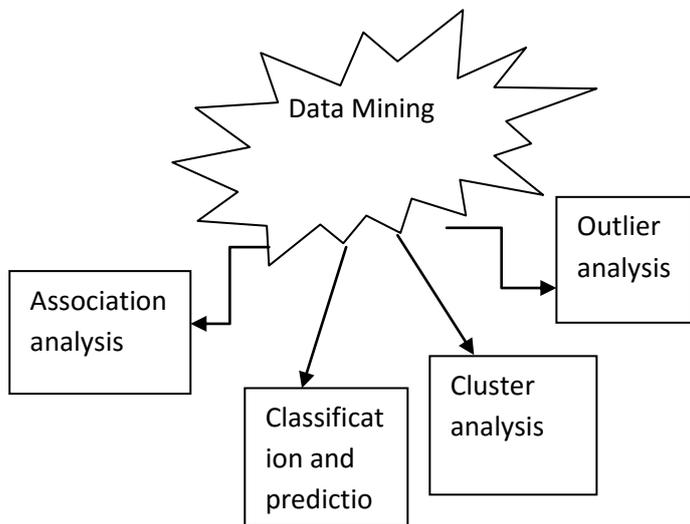
1. INTRODUCTION

In the before days, the rate of information growth is less, so the decision making is easy but as for now, there is the need for the data mining techniques. Because day by day the growth of information is getting grower Although there was the rapid growth of the information the first

and for most thing we have to do is to maintain the record and second most important thing is to easy retrieval or extracting information from large dataset. For this purpose data mining come into existence. This technique is useful in predicating, finding the relationship and also finding the patterns, behavior and forecasting from large data set which helps in many applications. Here this Paper deals with the applications of data mining techniques in agriculture, banking and medical.

2. PROBLEM ANALYSIS AND PROPOSED SOLUTIONS

The problem analyzed in the traditional system is to there is only limited number of information available so it is easy to collect and predict the information in various fields. As now there is the need for the huge number of data to be being collected and stored for prediction, decision making etc.., for this purpose, data mining provides the techniques to tackle the problem. The techniques available are:

- ASSOCIATION RULES
- CLASSIFICATION AND PREDICTION ANALYSIS
- CLUSTERING ANALYSIS
- OUTLIER ANALYSIS

2.1 AGRICULTURE:

Not only in the IT field , data Mining techniques may also apply to agriculture. Consider the department of agriculture and co-operation and call center has introduced which make use of mass media and telecom network in order to communicate and to get feedback from the farmer related to agriculture. Therefore the need for the data mining techniques comes into existence.

Association rule:

Generally association meaning finding the relationship among objects and find its support and confidences. Here the role of the association rule is to mine the frequently occurred feedback from the customers and to find the solutions related with it.

Classification and Prediction:

Classification helps us to distinguish objects or concepts and are in the form of decision trees , if-then rules, etc.., prediction helps us to predicate which type of soil suits for which crop production.

Clustering:

Generally clustering meaning grouping, here in the field of agriculture, there are many techniques available, one such technique is the portioning method, which helps to split the type of soil accordance with the area, and the different types of crops which can grown on particular soil.

Outlier analysis:

Outliers are denoted as noise, unwanted data or exception. In the field of agriculture, outlier analysis helps to remove rarely used data in order to remove unwanted space.

2.2 BANKING:

The number of customers in the banking field has been increasing day by day, as the customer count increases, so the data mining techniques helps to store and extract information in secure manner.

Association rule:

Association rule in the banking sector helps to identify the patterns and behaviors of customers such as what are the products should be promoted for the particular customer and to find out the probability for the particular customer will pay the loan etc..,

Classification and prediction:

Classification and **p**rediction helps to partition the customer based on probability for paying loan leave for a competitor and classify the customer based on the age, business people and the worker and to predicate to find out whether they will pay loan within tie and to promote a product.

Clustering:

Clustering helps to group the information which are similar and are closely related to that of customer for easy extraction of information. It includes many technique in which the best model for banking field is to use is the hierarchical model.

Outlier analysis:

Outlier analysis major role is in fraud detection, which are detected using tests based on probability model. Mainly used in uncover fraudulent usage of credit cards.

2.3 MEDICAL FIELD

In the field of medical or healthcare, there is the need of data mining techniques for the treatment, identification of different diseases and management of healthcare etc.., the medical field there may be sensitive or non-sensitive information data mining techniques may also help in securing sensitive information.

Association:

The association rules deals with the comparative study of the particular diseases and the relationship to the other disease. It also helps to mine the frequently occurred disease and to provide the treatment for it.

Classification and prediction:

The most important technique used in the medical field is to classify the type of disease and to predicate the reason for the particular diseases.

Clustering:

The data mining techniques classification is different from clustering. This technique helps to group the information which are closely related to one another. This type of method can be done with various methods, one such method is k-mean method.

Outlier analysis:

Outlier analysis is the type of analysis which can be done on the whole large dataset and helps to remove the list used or unnecessary data in the data set.

3. CONCLUSION

one of the vast emerging domain is the data mining. This paper deals with the applications of data mining techniques in the field of agriculture, banking and medical. Not only the above mentioned field but also the various fields such as education field, industrial field etc..,

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