

Implication Of Data Mining In Healthcare Sector

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Abstract

Data Mining is the process of extracting data from data warehouse where the hidden data can be retrieved .Data Mining is used in health care for detecting the fraud and diseases of patients. By collecting the patient details such as age, sex, blood pressure and blood sugar. By analyzing the details, the health care management can predict the heart disease of patient. The plenty of details of patients can be collected and stored in data warehouse to get the instant information about particular disease of patients or patient details can be retrieved .This data mining techniques helps in effective relationship with patients by providing treatments and predicting their disease through their information .Data mining can be effective at working with huge amount of data and to determine the strategic decisions towards patients. Based on the patient details health care can provide better and efficient treatment to the patients.

Introduction

Data mining is the most important area of research of finding a data from many data. Data mining is the successful application used in many sectors. It is most essential in health care sector. Decision making and clustering technique is used in healthcare based on the given information of patients. Data mining can be handled only by the skilled employee. Health care is implemented in various sector such as hospitals, companies etc. Treatment record of many patients can be collected and stored in data warehouse and it is computerized in data mining and then whenever it is needed the data can be retrieved since the patient cannot have the treatment records all the time hence the electronic record helps the patient to give treatment according to the previous treatment record of patients.

Objectives

1. To detect the issues and challenges of patient database maintenance in healthcare sector
- 2.To discover the patient database through electronic record
3. To provide information for treatment to the right patient

Importance of data mining in health care

Data mining is more need in health care .It is not only used to support public health but also private concern of health care sector. The plenty of treatment records can be stored hence it is more difficult to discover data by human hence it can be shifted to data mining to retrieve the data easily and quickly. It is evidence based medicine through electronic record, the medicine or treatment can be provided to the patient hence the hospital errors can be provided towards the patient.

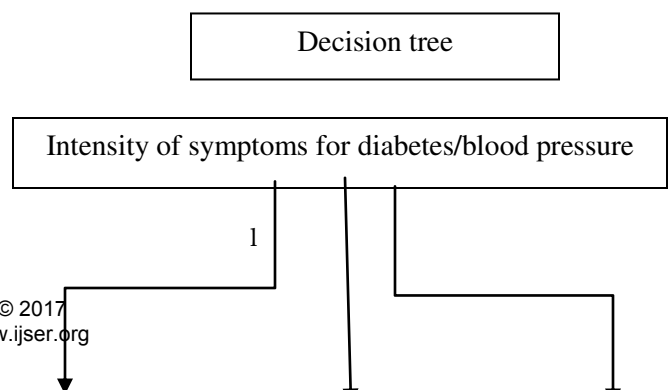
Methodology used in data mining

Decision tree

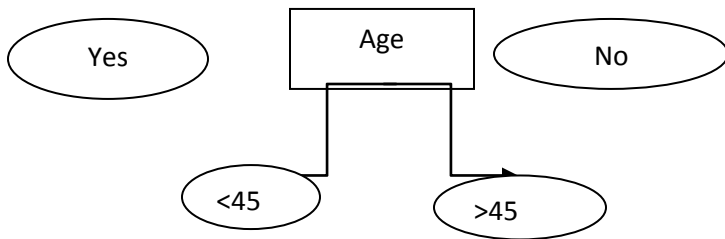
It is the representation of knowledge based on the statistical information.Decision tree consists nodes,leaf nodes and branches to represent the values and their characteristics.By using this technique, the person weight (in kg), height (in cm), blood pressure,alcohol drunker or not,whether the person smokes or not will be collected and defined in decision tree,by using these information the result can be predicted whether the patient is affected by diabetes or is there any chances for cardiac arrest can be resulted in the form of yes or no.Based on the result, the treatment will be given to the patients.

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at right time.



patient. Data mining is increasing popular in health care sector if not it is increasing essential. Data mining



Decision tree is built based on the following table

Advantages of data mining used in health care sector

- Evidence based electronic records.
- It enables the creation of electronic patient records obtained from monitoring of the patient visit to healthcare center

Obstacles of data mining in health care sector

Missing, incorrect, inconsistent or non-standard data such as pieces of information saved in different formats from different data sources create a major obstacle to successful data mining. It is very difficult for people to process gigabytes of records, although working with images is relatively easy, because doctors are being able to recognize patterns, to accept the basic trends in the data, and formulate a rational decision. Stored information becomes less useful if they are not available in easily apprehensible format

Conclusion

The survey of data mining application in medicine provides the better treatment for right patient at the right time by using their previous records. The hospital errors can be reduced and used in efficient way. The decision tree technique and regression techniques give better efficiency to predict the result and to give the better treatment. Even though the disease is common to all individuals, the disease such as diabetes, blood pressure can be analyzed, identified, and can be predicted by using data mining technology based on the information given by the

Age	Gender	Intensity symptoms	Result
22	Male	Low	No
54	Female	High	yes
45	Male	medium	No
71	Male	High	Yes
85	Female	High	Yes
45	Male	Low	No
42	Female	High	Yes
85	Female	High	Yes
65	Male	High	Yes
28	Male	Low	No

technology used in health care sector to track the diabetes and chronic diseases of patients.

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