Review on Blood Platelet Transfusion Using Data Mining

Dr. Hariganesh S [1], Vanitha.K[2]

Asst.Professor[1], M.Phil Scholar[2]
Department of Computer Application[1], Department of Computer Science[2]
Bishop Heber College (Autonomous)
Trichirappalli-620 017

ABSTRACT : *Platelet is the circulate of blood in our body, whey they blood vessels are damaged and it recognized. In this survey paper is discussed about the blood platelet are finding and causes about the disease and using algorithms. The platelet transfusions are successful or unsuccessful are explained.*

I.   INTRODUCTION

Data mining is the extracting knowledge from the large amount of data .It is defined find the hidden information in the database. Data mining is used for the many application there are medical, fraud detection, and marketing. Data mining is the four types of classes are used there are classification, clustering, regression, and association rule. Data mining is provides automatic pattern recognition   and attempts to uncover patterns in data that are difficult to detect with statistical method. Data mining is called the another names are Knowledge Discovery Database (KDD). Exploratory data analysis, datadiscovery, and deductive learning. Platelets are count with white blood cell and are related to the gravity of blood. Platelets are count with low and normal. Platelets are very low in our body they are affected in cancer, leukaemia and heavy bleeding. Suppose the blood platelet transfusion are successful we have check the many condition, for example the illness, temperature, age, and etc.

1.1 CLASSIFICATION

Classification is the predefined groups or classes. Classification is the guessing the data and it is the algorithms are requiring to the class and define to data attribute values. The blood platelet transfusion is using the classification techniques are rule induction, decision tree, neural network and back propagation.

1.2 CLUSTERING

Clustering techniques are using the algorithm are K Nearest neighbor means algorithm, and k medoid algorithm. Clustering is the grouping the data item.

1.3 ASSOCIATION RULE

Association rule is created and analyzing the data .the if /then patterns are used to the two relationship .There are support and confidence .support is how the data items are frequently seem in database. Confidence is how many times the if/then statement is true.

1.4 REGRESSION

Regression is the mathematical function it is find a function and which the models of data with least error.

Rule –induction

In the rule induction is the using if/then patterns .The rules are used in two parts .There are antecedent (if part)and consequent (then part).Example of the platelet transfusion of successful or unsuccessful in IF-THEN Rule induction.
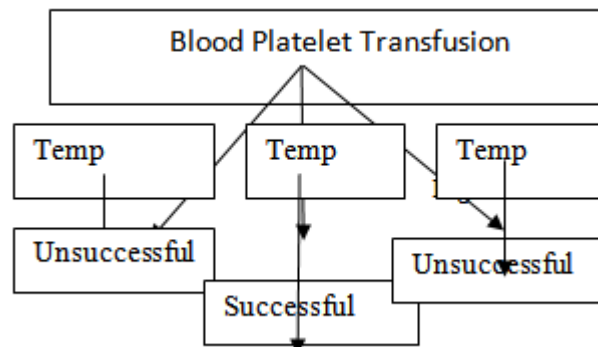**IF** Temperature =low **AND** Age<35

THEN
Transfusion= **UNSUCCESSFUL**

Decision tree

Decision tree is used to data analysis tool and can easily understand the easily transform the rule, the decision tree algorithm are CART, ID3, C4.5, HUNTS, SLIQ, and SPRINT. The main goal is the decision tree is minimizing the number of tree levels and tree node.

Artificial Neural Network (ANN)

    Artificial Neural Network (ANN) is used the medical image preprocessing and medical image object detection and recognition. The neural network is effectively making the information.

II.   RELATED WORKS

[1] P.Ramachandran& et al is discussed about the blood donors .this paper are discussed the analyses the different blood groups data set. They are explaining different blood group type and dataset and preprocessing data. The dataset are attribute, instance, numeric nominal and class. The weka tools are used.

[2] Devchand J.Chaudhari is discussed the blood platelet transfusion is successful or unsuccessful transaction. In this paper are used many attributes there are age, sex, illness, temperature, weight, patient HLA type, donor HLA type. The classification rules are used, and the algorithms are rule indication, decision tree, and ANN, and Backpropogation.

[3] Arpita GUPTA is discussed the platelet are count in white blood cells and the leukemia is suffer from the low platelet. The platelet measurement is specific gravity of blood of blood serum.WBC and MEMS .The matlab tool are used.

[4] Harleen kaur is discussed about the healthcare environment is understanding the 'information rich' and yet 'knowledge poor'. This paper is used to the rule indication, decision tree, and artificial neural network in massive volume in healthcare application. It is the paper is used to analyze the children diabetes mellitus and diabetes insipidus .The concept of the classification method is used in study in healthcare.

[5] Zhenghao Shi &el is discussed the application of neural network in medical pre processing. The neural network is used to the preprocessing, image segmentation, object detection and recognition. It is the paper the neural network is have several disadvantage is compared to another techniques. First, it ability to express qualitative knowledge and network topological structure. Second collect large number of abnormal cases for training is very difficult to the CAD scheme.

[6] John N.Weinstein is discussed the neural computing is using the cancer drug development .The neural network is used to the various areas are biomedical science. The cancer drug development is discussed about the neural network.

[7] Ankit Bhardwaj is discussed about the data mining and current trends are associated. The classification, clustering and association rule are used and the paper discussed in blood bank sector.

III.   CONCLUSION

    In this survey paper is taken   the blood platelet transfusion is used to classification rule. The blood platelets transfusions are transforming to successful or unsuccessful in human body and the cancer patient dataset are used sometimes the dataset used in the diabetes patient.

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