
LITREATURE SURVEY

PLASMA DONAR APPLICATION



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Soyed Mostafizur Rahman , Department of Computer Science and Engineering”FINDING THE NEAREST PLASMA DONORS USING DIJKSTRA ALGRITHM”,1999:

US clinics already allow the processing in special cases, an emergency-use permission of the Food and Drug Administration (FDA) would execute it more accessible to receive and offer patient plasma — the yellow liquid that continues after cells are separated from the blood.

Plasma therapy has proven to be very effective for Coronavirus. The main purpose of this task is to create a kinship with these two groups who require Plasma and who are ready to donate. We ought ascertained the shortest way within Plasma seeker and Plasma donors applying the Dijkstra Algorithm. Anybody can communicate the most expected plasma donor of any association in an appropriate area immediately. By achieving this plan, the harassment of the sufferer can be reduced and so various lives can be rescued. KEYWORDS: Plasma donor, Plasma Seeker, Dijkstra’s algorithm, Shortest path, Nearest Don.

Subramanian Mahadevan¹, 2000 ,S Poornima,Journal of physics 2004“A survey on machine learning algorithms for the blood donation supply chain”: Logistic

Regression Developed by David Cox in 1958, logistic regression is a popular method to solve binary and multivariate classification problems. As the name suggests, it's named after the logistic function. $f(x) = \frac{1}{1 + e^{-x}}$ Referred to as the sigmoid function, it accepts any real valued number and outputs a numeric value between 0 and 1. If the value is above a certain numeric threshold a TRUE value is given as the outcome. If it is below the threshold, a FALSE value is shown. The cost function used to modify the value of the predicted output is given as follows:- $cost(f(\theta), y) = \begin{cases} -\log(\theta(y)) & , \\ \theta(y) = 1 \\ -\log(1 - \theta(y)) & , \theta(y) = 0 \end{cases}$ Logistic Regression has various applications in the medical field such as predicting severity of a patient, risk of contracting a disease based on available factors and mortality rate. As an example, The TRISS (Trauma and Injury Severity Score) was created by Boyde CR using this algorithm. Some of the other applications for this algorithm include predicting the voting patterns of the general public,

finding out the probability of failure of a product and speculating about mortgage defaulters.

B. Artificial Neural Networks Artificial neural networks are based on the functioning of biological brains, which consist of an interconnected set of neurons. The first layer is called the input layer, which feeds the initial input to the model, and the final layer is the output layer, which produces the terminal output. Between those two, there may be one or more hidden layers. Each neuron at one level is connected to every other neuron in the next level. On receiving an input, a neuron applies an activation function to the signal, which introduces nonlinearity to the model. A weight matrix, which is applied to the input signals between layers, is modified to train the network, using backpropagation. The given figure demonstrates the rudimentary working of a typical artificial neural network.

Sulthan Turhan, "An Android Application for volunteer blood donors", computer science & Information technology-CSCP, pp.23-30-2015: The smartphone application is being developed to allow searching for voluntary donor nearby; followed by communication between donor especially on the emergency situations.

Seda bas, Giuliana Carello, Semih Yalcindag. Sep 2016, "Management of blood donation system": One of them is the Blood Donation (BD) system, aiming at providing an adequate supply of blood to Transfusion Centres (TCs) and hospitals. Blood is necessary for several treatments and surgeries, and still a limited resource. The need for blood is about ten million units per year in the USA, 2.1 in Italy and 2 in Turkey; moreover, people still die in some countries because of inadequate supply of blood products (World Health Organization 2014). Hence, BD plays a fundamental role in healthcare systems, aiming at guaranteeing an adequate blood availability to meet the demand and save lives.

**T. Santhanam and Shyam Sundaram PG and Research
Department of Computer Science ,”Application of CART
Algorithm in Blood Donors Classification”, 2016:**

Approach: Identify the blood donation behavior using the classification algorithms of data mining. The analysis had been carried out using a standard blood transfusion dataset and using the CART decision tree algorithm implemented in Weka. Results: Numerical experimental results on the UCI ML blood transfusion data with the enhancements helped to identify donor classification. Conclusion: The CART derived model along with the extended definition for identifying regular voluntary donors provided a good classification accuracy based model. Key words: Blood donor, data mining, classification algorithms, decision trees.

Ashlesha C. Adsul, V.K. Bhosale,R.M. Autee-“Automated blood bank system using Raspberry PI”,2018:When there is urgent need for blood then if this model is adopted the caller is immediately connected to the

donar. However, dealing with the phone user is a drawback.

Rishab Chakrabarti¹, Asha Darade², Neha Jadhav³, June 2020,"Lifesaver E-Blood Donation App Using Cloud": E-health provides a new method for using health resources. In proposed system the aim is to provide a direct call routing technique using Asterisk hardware. A blood bank database is created by collection of details from various sources like Blood banks, NSS, NGO's, hospitals and through web interface. The data collected will be maintained in a central server. This central server will be associated with a Toll-free number that can be used to connect to it. An algorithm will be defined based on the various parameters that need to be accounted for, before blood transfer is done. The willingness of donor and the closeness of the donor to the place from where the call is coming are also accounted for in defining this algorithm. Based on the algorithm the most eligible donor is found out. From the server the call from the required person is routed to the eligible donor's number. All information about the donors and blood bank is stored on the cloud. As per blood requirement, user can quickly get notification from blood bank within the radius of 5-10km. This is how the proposed system will work.

