

Panimalar Engineering College

IBM Nalaiya Thiran

Literature Survey

Plasma Donor

1.) Title:

Nearest Blood & Plasma Donor Finding: A Machine Learning Approach

Year:

December 2020

Authors:

Nayan Das, MD. Asif Iqbal Department of Computer Science and Engineering (CSE)

Description:

The necessity of blood has become a significant concern in the present context all over the world. Due to a shortage of blood, people couldn't save themselves or their friends and family members. A bag of blood can save a precious life. Statistics show that a tremendous amount of blood is needed yearly because of major operations, road accidents, blood disorders, including Anemia, Hemophilia, and acute viral infections like Dengue, etc. Approximately 85 million people require single or multiple blood transfusions for treatment. Voluntary blood donors per 1,000 population of some countries are quite promising, such as

Switzerland (113/1,000), Japan (70/1,000), while others have an unsatisfying result like India has 4/1,000, and Bangladesh has 5/1000. Recently a life threatening virus, COVID-19, spreading throughout the globe, which is more vulnerable for older people and those with pre-existing medical conditions. For them , plasma is needed to recover their illness. Our Purpose is to build a platform with clustering algorithms which will jointly help to provide the quickest solution to find blood or plasma donor. Closest blood or plasma donors of the same group in a particular area can be explored within less time and more efficiently. Keywords— Blood donation , Plasma donation , K means clustering, Labeled Agglomerative clustering

Methodology:

After cleaning and pre-processing a blood donor dataset with 2375 records was used for experimental results and analysis. After cleaning, Eight hundred seventy-five records of this dataset were contributed by a local blood donor camp from Chittagong, Bangladesh. The rest of the 1500 records were provided by another blood donor camp from Dhaka, Bangladesh. Name of the Donor, Mobile Number, and other sensitive information was discarded from the dataset by authorities. In figure 8, an open street map is shown with user latitude and longitude to show user distribution across Bangladesh. This open street map is drawn on the tableau desktop version. Usually, in the urban area, there are many donors than in rural areas.

Conclusion:

In our whole project, we have built a platform for the blood donor and receiver. We have combined two well known clustering algorithm, k-means, and agglomerative clustering, to solve the problem. From experimental results analysis, we can descry that our system gives a more robust and efficient result in this regard. Our sole purpose is to reduce the time as well as the sufferings of the people. A blood or plasma recipient can efficiently get donors using our system in any situation.

2.) Title:

Mobile application oriented to the attention of blood donors in the medical centers of northern Lima

Year:

October 2020

Description:

In this article we focused on people getting to know the importance of blood donation. The Android application to be done will be made so that patients can have easy access to donate blood. Our task is created from two points of view, patient and benefactor. Validation was done to the client, with registration and login for new and existing clients. Where an individual can validate their personal data and see the corresponding place where they can donate blood. The result obtained is the proposal of a more productive approach, optimizing the processes for the donation, through an application, where each patient can perform this function, and

thus increase the participation of blood donors. Thus, all blood donations are interconnected to the benefactors in a system, saving their information and blood data, for the increase of blood in Peru.

Keywords- Blood Donation, Mobile Application, Agile Methodology, Health

Methodology:

- In one study, we were able to see that a total of 95 participants completed the questionnaire adequately. On average as a percentage, we see that only 20% of people have donated blood, and that 80% of the participants never donated blood
- The second section of the questionnaire found that 50%, 38.95%, and 8% of participants were equally, more, and less willing to donate blood respectively after exposure to information about donating blood.

Conclusion:

In this research we managed to design the prototype of the mobile application with the Balsamiq Mockups tool that shows the digital aspect of all the modules of the application, helping to achieve a better solution to the situations of the user's role that in this case the patients come to do, a design that allows the patients to register online in the situation we are in today. In the end we saw good results with the mobile application, it was well adapted to the users and of good help, with this application we want to continue increasing the blood rate at a

national level that we have, is of great contribution to the country.

3.) Title:

Blood Bank App using Raspberry PI

Year:

December 2018

Authors:

Surabhi Pohandulkar Dept. of Electronics and
Telecommunication5

Chhaya Khandelwal Dept. of Electronics and
Telecommunications

Description:

The paper “Blood bank application using raspberi pi” proposed to bring near blood bank and the person who need the blood due to accident or any emergency. Our aim to propose this paper is to reduce the time span between the donor and recipient. By using Raspberry pi 2 and GSM modem SIM900A, we collect all the data base from blood bank and fetch the given data as per request from recipient. The fetched blood donor data is sent to the recipient and also with addition an IP Address is attached to the message which allows the recipient to download an app and get all the information. The vision of this paper is “To provide a better service of every person who is in search of blood

Keywords – Raspberry PI 3 , Blood Bank, Information system.

Literature Survey:

- Android Blood Donor life saving Application

Paper Presented by T. Hilda Jenifah and R. Backiya Lakshmi in the year 2014 is based on cloud computing application. It Propose development of a system that will link between blood donors and blood banks.

- Reducing Complexity of blood donation

Paper Presented by Y. M. Balonekar & S. Dharde uses Data Mining concept is widely used now a days in various applications as data base driven system are in demand. Data Paper Presented by Y. M. Balonekar & S. Dharde uses Data Mining concept is widely used now a days in various applications as data base driven system are in demand. Data

Conclusion:

Blood is the vital part of the body. It cannot be produced artificially in any laboratory. Considering this fact in emergency situation receptor of the blood is totally dependent on blood from authenticate source. Blood bank Application using Raspberry PI tries to lower the communication gap between the person in need of the blood and source of the like blood bank or any volunteer blood donor nearby.

4.) Title:

Blood Donation And Life Saver-Blood Donation App

Year:

December 2016

Authors:

- Anish Hamlin M R, P.G Student, Department of Computer Science and Engineering,
- Albert Mayan J, Department of Computer Associate Professor

Description:

“Blood” one of the most important necessity of our life . The numbers of blood donor is very less when compared with other countries. In our project we propose a new and efficient way to overcome such outline. Such as just touch the button donor will be ask to enter an individual’s details like name , phone number, age, weight ,date of birth , blood group , address etc . At the emergency time of blood needed we can check for blood donor nearby by using GPS. Once the app user enter the blood group which he/she needed it will automatically show the donor nearby and send an alert message to the donor .In case if the first donor is not available it will automatically search the next donor which is present in queue.

Keywords - Blood, Android smart phone, Donor, GPS.

Methodology:

The proposed method is to create a android application in which the blood donor are available easily at required time. The donor who are all register in this application are show while searching for blood donation. The donor who are all nearby location are tracked by the GIS. The purpose of this application is donate blood while in case of emergency. The application also provide various information about donating blood and who are all willing to donate blood can register through this application.

Conclusion:

In this paper, we have proposed a reliable information system based on GIS and OTP in android mobile. The main concept of this proposed system is to valuable to health care. By using this application, the existing problem such as mis use of details and wrong information provided to third party is replaced

5.) Title:

mHealth: Blood Donation Application using Android
Smartphone

Year:

July 2016

Authors:

- Muhammad Fahim, Department of Computer Engineering
- Halil Ibrahim Cebe, Department of Computer Engineering

- Jawad Rasheed, Department of Computer Engineering
- Farzad Kiani, Department of Computer Engineering

Description:

mHealth is new horizons for health that offers healthcare services by utilizing the mobile devices and communication technologies. In health care services, blood donation is a complex process and consumes time to find some donor who has the compatibility of blood group with the patient. We developed android based blood donation application as mHealth solutions to establish a connection between the requester and donor at anytime and anywhere. The objective of this application is to provide the information about the requested blood and number of available donors around those localities.

Keywords- Blood donation, mHealth, Smartphone

Methodology:

We developed the mHealth blood donation application in open source development tool android studio. Our application has two modes (i.e., donor and requester) to interact with the proposed mHealth application. In voluntary donor mode, system will ask necessary information about the name, surname, user name, password, city, age and blood group. In case of requester mode, application ask patient name, age, blood type, urgency of blood, hospital name, and contact information and optional small note. Our system starts from user registration

and then classify the users as blood donors or requester. Blood requester can broadcast the blood request and donor will access this request anywhere anytime through cloud server. Volunteer donor will response to the request and requester will be notified about it.

Conclusion:

mHealth is one of the best possible concept for the provision of health care services and improve quality of life. This paper presented the conceptual design and prototype development of mHealth application for blood donation. We investigate the requirements in terms of communication, storage, processing and smart phone development platform to make it an acceptable solution. We believe that our application is ubiquitous solution and may provide timely access to the blood donors and requester to handle the emergency situation. In the future work, we have plan to add vaccination calendar and public service messages to our application. We also have plan to enhance the functionality of the application by removing a valid donor from the information alert list for 89 days after receiving information about last donation date.