

# IDEATION PHASE

## LITERATURE SURVEY

Project Name	Plasma Donor Application
Team ID	PNT2022TMID02973
Date	01 September 2022

### 1. In year 2021, "A Systematic Review & Design of Web-Based Blood Management System".

**AUTHORS:** Gokul Dudani, Tanushree, Kajal Singh, Anushka Singh Chauhan.

Blood is a fluid that carries oxygen and is a connective tissue that carries other substances because of its volume. Now that we understand the importance of blood, we see that it not only carries oxygen to the tissues but also clears the air between them through the heart and blood vessels. The average volume of blood donation is 470ml per person, which is only 8% of the adult volume. When blood is needed in a hospital, it is usually not available in time, leading to inconsistencies. Both patients and sponsors are unaware that the donor is being hospitalized due to a lack of communication and other services.

A system like this is needed to close the communication gap between hospitals, blood banks, donors, and receptors. The main purpose of a web-based blood donation program is to ensure compliance with blood stock. In today's system, first and foremost the hand system, and when a person needs a blood type and that type is not available in that blood bank, it takes time to process blood from another blood bank, which may adversely affect the patient's health because time is critical in emergencies. Therefore, a

web-based blood donation system is a good place to monitor whether a particular type of blood is available in a stock or not, as well as to provide a place where blood can be accessed.

## **2. In year 2021, "Web Based Online Blood Donation System".**

**AUTHORS:** R. Kumar, R. Kumar and M. Tyagi.

This paper depicts a high level program to close the hole between blood givers and individuals needing blood. The online blood donation administration framework application is an approach to synchronize blood donation centers with emergency clinics with the assistance of the web. It is a web application where enlisted clinics can check the accessibility of the necessary blood and can send a blood solicitation to the closest blood donation center or comparable contributor as per the blood and can be controlled online through where fundamental. Blood donation center can likewise send a solicitation to another blood donation centers that isn't accessible.

Anybody willing to give blood can be found at the closest blood donation center utilizing the android bank the executive framework. Blood donation center can be followed utilizing maps. The android application is simply accessible to benefactors to look for blood gifts and ask blood donation centers and clinics to search out blood donation center and close by givers.

## **3. In year 2020, "Towards an Efficient and Secure Blood Bank Management System".**

**AUTHORS:** P.A.J. Sandaruwan, U.D.L. Dolapihilla, D.W.N.R. Karunathilaka; W.A.D.T.L. Wijayaweera, W.H. Rankoth.

A blood bank plays an important role in a hospital as well as in a country, ensuring safe and timely blood transfusions. However, there are several challenges faced by blood banks around the world, specifically when securing the blood supply chain. Reducing the

supply-demand imbalance, protecting the data privacy of donors as well as receivers, are some of them.

Therefore, there is a timely requirement for an effective and secure management system for the blood bank. We have proposed a management platform for the blood bank operations with the following modules: (1) forecast blood demand, (2) suggest blood donation campaign locations and (3) secure blood supply chain. The proposed platform has been implemented using techniques such as Long Short-Term Memory (LSTM), k-means clustering, Geographic Information Systems (GIS), and block chain. Our results show that using our proposed modules, we can minimize the imbalance between supply and demand of blood, find the most suitable donor in an emergency, and enhance the privacy of data.

#### **4. In year 2018, “Automated blood bank system using Raspberry PI”.**

**AUTHORS:** Ashlesha C. Adsul, V. K. Bhosale, R. M. Autee .

“Raspberry pi based blood bank system” proposed to bring blood donors to the one place. The aim of this system is fulfil every blood request by using android application and raspberry pi. In the proposed system, data about the donors will be collected by using android application and raspberry pi by installing systems at places such as hospitals, blood banks etc. These data will be stored in the database. User/Patients needs to access application and needs to enter his requirements about the blood in the application the requirements are matched with the database and message will be to that particular blood donor through GSM modem.

#### **5 .In year 2016, “Short message service (SMS) based blood bank”.**

**AUTHORS:** G. Muddu Krishna & S. Nagaraju.

They proposed a system in which services of blood bank will be accessed via SMS. If someone needed blood then they have to

request for blood via SMS and then packet count module of their system will check for availability of blood and response will be given by data processing module.

## **6. In year 2015, A Health-IOT Platform Based on the Integration of Intelligent Packaging, Unobtrusive Bio-Sensor and Intelligent Medicine Box.**

**AUTHORS:** Geng Yang, Li Xie, Matti Mantysalo, Xiaolin Zhou, Zhibo Pang, Li Da Xu, Sharon Kao-Walter, Qiang Chen, Lirong Zheng.

In this paper, an intelligent home-based healthcare platform is proposed and implemented. It involves iMedBox with connectivity, iMedPack with communication capability enabled by RFID, Bio-Patch and SOC. It fuses with IOT. The body-worn Bio-Patch can detect and transmit the user bio-signals to the iMedBox in real time. The only limitations are, comprehensive platform missing. And the Physical size, rigid nature and short battery become limitation for long term use.

## **7. In 2015, Mobile Based Healthcare Management using Artificial Intelligence.**

**AUTHORS:** Amiya Kumar Tripathy, Rebeck Carvalho, Keshav Pawaskar, Suraj Yadav, Vijay Yadav.

In this paper, the health-care management system is proposed which will consist of mobile based heart rate measurement so that the data can be transferred and diagnosis based on heart rate can be provided quickly with a click of button. The system will consist of video conferencing to connect remotely with doctor. The system will also consist of Doc-Bot and an online Blood Bank. In this implemented project, heart rate calculation differs from actual one due to noise present in input signal. So the performance is not efficient in practical. Methodology used Clustering, Text Mining, Pattern Matching, Support Vector Machine, Partitioning Algorithm

and DonorHART tool used in collecting donor reaction information. Limitations are Difficulty in handling emergency situation and No proper security for personal details misuse.

#### **8.In 2012, “Automated online blood bank database”.**

**AUTHORS:** Muhammad Arif; S. Sreevas; K. Nafseer; R. Rahul.

They come up with direct call routing technique by using asterisk. In this every blood bank consist of a database and that will be managed by central server. When someone in need of blood call on their toll free number. They will directly get connected to a donor and after receiving blood from that donor name of that donor will be kept on hold for 8 weeks.

#### **9. The “Benefits of management information system in blood bank”.**

**AUTHORS:** Dr. Sharad Maheshwari and Vikas Kulshreshtha.

They discusses about the beneficiaries of the blood bank management information system. They show advantages and benefits of these systems.

#### **10. The “MBB: A life saving application”.**

**AUTHORS:** Ramakant Gawande, Narendra Gupta, Nikhil Thengadi.

They come up with a system to link all donors and help in controlling blood transfusion process. Their system will also maintain database which hold data of donors and blood according to their city and further by their locality.they have proposed a machine so that it will hyperlink all donors. The machine will help to control the blood transfusion service and create a database to maintain records on shares of blood in every place as records on donors in every city. Moreover, human beings will be capable of see which sufferers want blood components thru the application. They will be able to check in

as donors and as a result acquire a request from their nearby customers who desires blood to donate blood in instances of want.