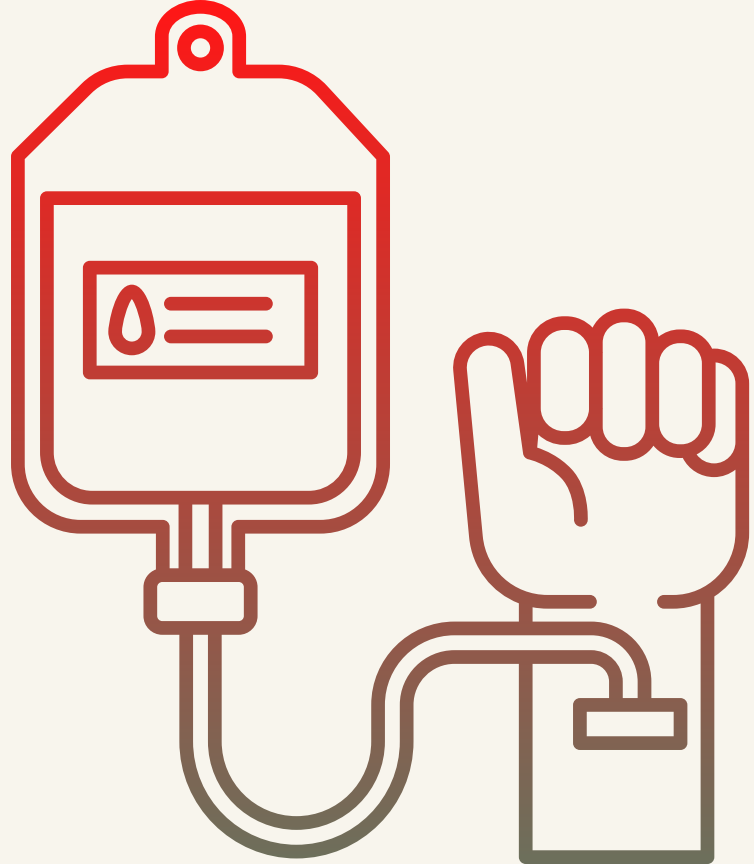# PLASMA DONAR APPLICATION

Mentor

Mr.D.Vijayakumar

AP(SG),CSE

Prepared and Presented by

Dhanya Laxmi S – 1912006

Nithya G – 1912018

Kaveri K – 1912043

Jervila R – 1912044

PROBLEM STATEMENT

During the COVID 19 crisis, the requirement of plasma became high and the donor count being low. Saving the donor information and helping the need by notifying the current donors would be a helping hand.

● It is very difficult find the respective blood group donors when anyone is in need

● In regard to the problem faced, an application is to be built which would take the donor details store it and inform them upon a request
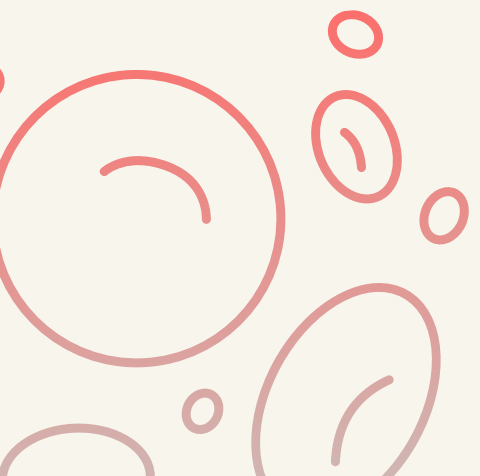
ABSTRACT

A plasma is a liquid portion of the blood, over 55% of human blood is plasma. Plasma is used to treat various infectious diseases and it is one of the oldest methods known as plasma therapy. Plasma therapy is a process where blood is donated by recovered patients in order to establish antibodies that fights the infection. For instance, during COVID 19 crisis the requirement for plasma increased drastically as there were no vaccination found in order to treat the infected patients, with plasma therapy the recovery rates where high but the donor count was very low and in such situations it was very important to get the information about the plasma donors. Saving the donor information and notifying about the current donors would be a helping hand as it can save time and help the users to track down the necessary information about the donors.

LITERATURE SURVEY

PAPER : "A standard compliant Blood Bank Management System with enforcing mechanism"[IEEE S. Srivastava, et al.., pp.1-7 2015]

TECHNICQUE USED : Temperature Tag Barcode Interface SMS and e-Mail Server Biometrics Smart Card
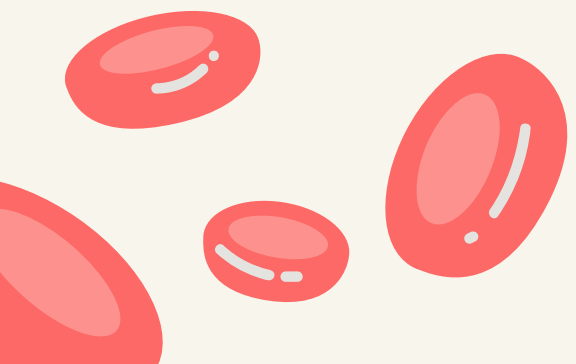
DISADVANTAGES : The staffs at the blood donation centers are unfamiliar with such a framework. Project Management Unit or PMU should be positioned at different centers to take care of specialized issues. The PMU also needs to teach the staff to resolve technical issues, due to the demanding nature of service.

PAPER : "Mathematical Programming Models for Annual and Weekly Bloodmobile Collection Planning" [IEEE V. Augusto,et al.., vol. 12, no. 1, pp. 96-105, Jan. 2015]

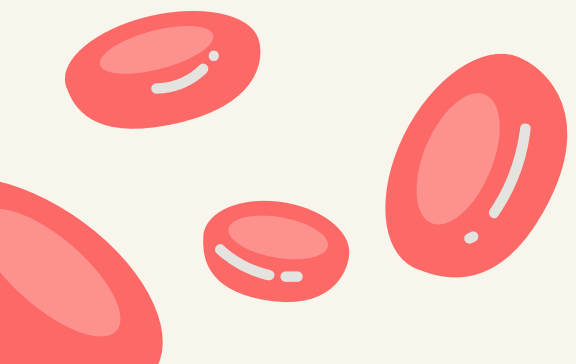**TECHNICQUE USED :** Mixed Integer programming Models Vehicle Routing Problem

DISADVANTAGES : Data evaluated and fed is specific to a single first world country and might be globally irrelevant. If the donation parameters and annual demand are not well known then such planning can prove to be hazardous.

PAPER :

"Predicting Donor's Likelihood of donating blood given various factors" [International Journal of Pure and Applied Mathematics
Volume 118 No. 22 2018]

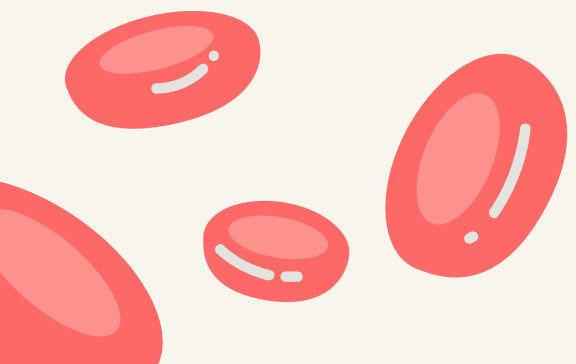**TECHNICQUE USED :**

Logistic Regression

DISADVANTAGES :

Data is specific to a location and is not in-house. Lack of research on blood donor behavior and characteristics. Bad accuracy of donor score overfitted model.

PAPER : Investigation of hesitancy to donate plasma among COVID-19 survivors [International Journal of community medicines and public health Dhupdale NY et al. Int J community Med public health 2021 Dec;8(12)]
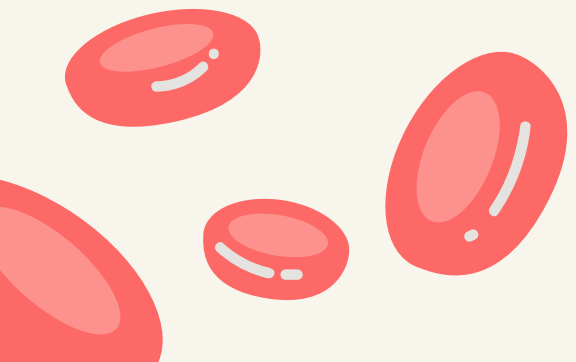
TECHNICQUE USED : Snow ball technique

DISADVANTAGES : only selected members had an opportunity to be part of the study, this could affect the generalizability of the research findings.The first limitation is that the study analyses the intentions and not actual practice of CCP donation.

PAPER :   Blood donor and requester mobile application. [Vamsi Krishna Tatikonda and Hosam El-Ocl]

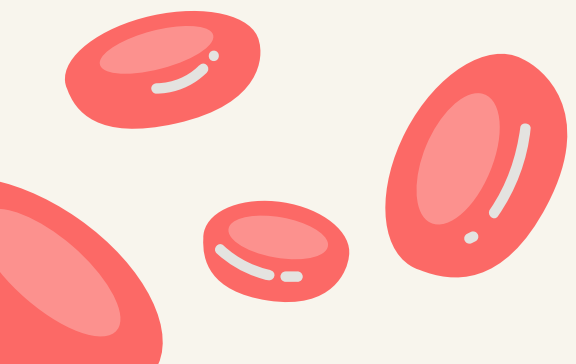**TECHNICQUE USED :**   Ruby along with JavaScript and PostgreSQL for database

DISADVANTAGES :   Using Bloodr application Donor may track his/her donation history details using "Donation History"

PAPER : Implementation of blood donation applicatioin using android smartphone.[Pradnya Jagtap , et al.., Volume 3 Mar-2018]
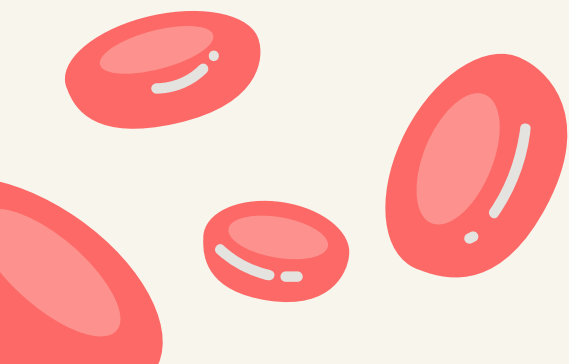
TECHNICQUE USED : Cloud Computing

DISADVANTAGES : The only limitations are, comprehensive platform missing. And the Physical size, rigid nature and short battery become limitation for long term use.

PAPER : Location-based Mobile Application for Blood Donor Search [International Journal of Advanced Computer Science and Applications, Vol. 13, No. 4, 2022]

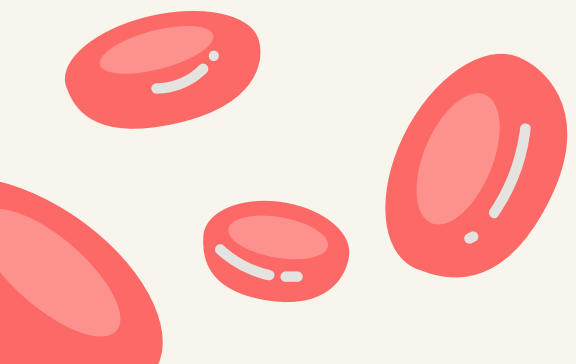**TECHNICQUE USED :** Scrum Methodology

DISADVANTAGES : It is not listing blood donation center authorized by the ministry. To a lesser extend the time it took for the playstore to review the mobile application.

PAPER :   PlasmaLife – Blood/Plasma Bank application [Creniputer Lab]

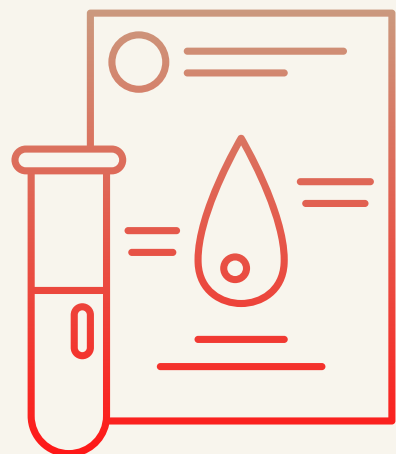**TECHNICQUE USED :**   Snow ball technique

DISADVANTAGES :   This application is complicated to use and it is more complicated to understand the features. And the given details are inappropriate.

PAPER : Blood Plasma application []

TECHNICQUE USED : Snow ball technique

DISADVANTAGES : only selected members had an opportunity to be part of the study, this could affect the generalizability of the research findings.The first limitation is that the study analyses the intentions and not actual practice of CCP donation.

Thank You