Plasma Donor Application

Literature Survey:

Paper-1: A FRAMEWORK FOR A SMART SOCIALBLOOD DONATION SYSTEM BASEDON MOBILE CLOUD COMPUTING.

Publication Year: November 2014

Author: Almetwally M. Mostafa, Ahmed E. Youssef, GamalAlshorbagy

Journal Name: Research gate

Summary: Blood Donation and Blood Transfusion Services (BTS) are crucial for saving people's lives. Recently, worldwide efforts have been undertaken to utilize social media and smartphone applications to make the blood donation process more convenient, offer additional services, and create communities around blood donation centres. This application helps people receive notifications on urgent blood donation calls, know their eligibility to give blood, search for the nearest blood centre, and reserve a convenient appointment using temporal and/or spatial information. It also helps establish a blood donation community through social networks such as Facebook and Twitter.

Paper-2: Smart Blood Bank as a Service on Cloud

Publication Year: April 2016

Author: Bharathwaj Muralidaran , Akshay Raut , Yogesh Salve , Shivshankar Dange ,Likhesh Kolhe

Journal Name: IOSRjournals

Summary: We all know the working of blood bank management system. A blood bank is a cache or bank of blood or blood components, gathered as a result of blood donation or collection, stored and preserved for later use in blood transfusion. blood transfusion.[1] In this project our aim is to develop a web application, which will be hosted on cloud and will provide fast and easy access to reports. We are using a concept of cloud computing. As we all know what the simple definition of cloud is computing in a very simple word, we say cloud computing is an on-demand services.

Paper-3: KNOWLEDGE, ATTITUDE AND PRACTICES REGARDING VOLUNTARY BLOOD DONATION AMONGST UNDERGRADUATE MEDICAL STUDENTS AT A TEACHING HOSPITAL IN NORTH INDIA

Publication Year: July 2020

Author: Dr Vartika Tripathi, Dr Priya Sharma,Dr Pankaj Singh, Dr Uma Gupta

Journal: INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

Summary: Voluntary blood donations are imperative for safe and adequate supply of blood. Assess the knowledge, attitude and practices (KAP) regarding voluntary blood donation amongst undergraduate medical students in a teaching hospital in North India and evaluate the factors hindering voluntary blood donations. There was high level of knowledge (86.75%) and favorable attitudes (91.39%) of the respondents towards voluntary blood donation, the practices involving the same were found to be inadequate (38.41%).The fear of weakness, injection followed by lack of opportunity were discovered to be the main factors hindering blood donation. It is through the education and motivation of the younger population that 100% voluntary non-remunerated blood donation can be achieved.

Paper-4: A Secure Cloud Computing Based Framework for the Blood bank.

Publication Year: April 2017

Author: Mr. Shreyas Anil Chaudhari, Ms. Shrutika Subhash Walekar, Ms. Khushboo Ashok Ruparel,Ms. Vrushali Milind Pandagale

Journal: American Journal of Engineering Research

Summary: A blood Bank can be defined as a bank or storage place where blood is collected, preserved and used whenever needed or demanded. Everyone is aware that the traditional blood bank management system includes paperwork. Its way of working is not efficient enough at the time of emergency situations. The main aim of creating cloud-based blood bank system is to make the blood available on time to the people, even in emergency situations. With the help of this project, the user can be able to view information about every entity related to blood bank i.e. hospitals, donors, a location of another blood bank etc. The security factor is maintained properly.

Paper-5: Developing a plasma donor application using Function-as-a-service in AWS

Publication year: January 2021

Author: Aishwarya R Gowri

Journal: International Journal of Interdisciplinary Innovative Research &Development (IJIIRD)

Summary: 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. In this project plasma donor application is being developed by using AWS services. 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.

Paper-6: Lifesaver E-Blood Donation App Using Cloud

Publication year: June 2020

Author: Rishab Chakrabarti, Asha Darade, Neha Jadhav, Prof. S. M. Chitalkar

Journal: International Research Journal of Engineering and Technology (IRJET)

Summary: 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 central server will be associated with a Toll-free number that can be used to connect to it. 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. If requested blood group is available in the blood bank then it will send positive reply message to the users. If requested stock is not available in the blood bank then blood bank send notification to all donors. If anyone is able to donate then he will reply to blood bank. This is how the proposed system will work.

Paper-7: A Research Paper on Blood Donation Management System

Publication year: May 2021

Author: Devanjan K. Srivastava, Utkarsh Tanwar, M.G.Krishna Rao, Priya Manohar, Balraj Singh

Journal: International Journal for Creative Research Thoughts (IJCRT)

Summary: Blood donation and transfusion has been an ever-serious issue and the shortage of blood throughout the world has caused many people to lose their life. The lack of a centralized system for blood donation is majorly responsible for those losses. An automated system is required to manage the centres and to showcase the information to the interested parties. We have designed a SQLite database as an integral part of the integrated framework to store historical blood donation data in a centralized database for analytical processing. The proposed system would enable people to register as a donor to make themselves available whenever in need of their blood type. We have introduced a search tab to search available people ready to donate. In our proposed system in the donor registration, health-related details would be updated in the blood management system database for all to see.

Paper-8: RESEARCH PAPER ON CLOUD COMPUTING

Publication year: APRIL, 2021

Author: Mrs. Ashwini Sheth, Mr. Sachin Bhosale , Mr. Harshad Kadam

Journal: CONTEMPORARY RESEARCH IN INDIA

Summary: Cloud computing, the life time dream of computing as a utility, has the capacity to convert a huge part of the IT industry, making software even more attractive as a service and shaping the way IT hardware is designed and purchased. Developers with new invention ideas for new Internet services no longer require the huge capital outlays in hardware to deploy their service or the human expense to operate it. They need not be worried about overprovisioning for a service whose popularity does not meet their predictions, thus wasting costly resources, or under provisioning for one that becomes wildly popular, thus missing potential customers and revenue. In addition to, companies with huge batch-oriented tasks can get results as fastest as their programs can scale, since using 1,000 servers for one-hour costs no more than using one server for 1,000 hours. Without paying a premium for large scale, is unprecedented in the history of IT, by this elasticity of resources.

Paper-9: Convalescent Plasma Therapy: Data driven approach for finding the Best Plasma Donors

Publication year: August 2021

Author: M N Noorshidha, Dr.G.Aghila

Journal: Proceedings of the International Conference on Artificial Intelligence and Smart Systems (ICAIS-2021)

Summary: Convalescent Plasma Therapy is an investigational therapeutic method recommended as a treatment strategy for COVID-19 as vaccines, and proper treatment methods were unavailable. The therapy involves transfusing antibody contained plasma from the COVID recovered individuals (donors) into critically affected patients. It implies the possibility of implementing Machine Learning Classification models for predicting the Eligible donors (who meet the threshold antibody level for donation) and Regression models to predict the antibody level value of a donor from the person's clinical history before conducting tests for the same. The proposed system can help the health authorities approach the most probably efficient donors for the therapy rather than wasting time and test kits on a random donor who may or may not be eligible. The results from various ML algorithms trained on a synthetic clinical history dataset are examined and assessed as significant to some degree. The system has to be validated against real data to arrive at reasonable conclusions.

Paper-10: Nearest Blood & Plasma Donor Finding: A Machine Learning Approach

Publication year: December, 2020

Author: Nayan Das, MD. Asif Iqbal

Journal: 23rd International Conference of Computer and Information Technology (ICCIT)

Summary: 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. 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 plasm a donor. Closest blood or plasm a donors of the same group in a particular area can be explored within less time and more efficiently.

Paper-11: Blockchain-Based Management of Blood Donation

Publication year: November 2021

Author: DIANA HAWASHIN , DUNIA AMIN J. MAHBOOBEH , KHALED SALAH ,

(Senior Member, IEEE), RAJA JAYARAMAN , IBRAR YAQOOB , (Senior Member, IEEE), MAZIN DEBE , AND SAMER ELLAHHAM

Journal: IEEE access

Summary: Today's a large number of blood donation management systems fall short in providing traceability, immutability, transparency, audit, privacy, and security features. Also, they are vulnerable to the single point of failure problem due to centralization. In this paper, we propose a private Ethereum blockchain-based solution to automate blood donation management in a manner that is decentralized, transparent, traceable, auditable, private, secure, and trustworthy. The proposed solution stores non-critical and large data off-chain using the decentralized storage of the InterPlanetary File System (IPFS). We present the system architecture, sequence diagrams, entity-relationship diagram, and algorithms to briefly explain the working principles of our blood donation management solution. We evaluate the performance of our solution in terms of efficiency and effectiveness through performing security analysis.

Paper-12: Covid-19 Plasma Monitoring Based on Clustering a Large Set of Recovered Patient Data.

Publication year: September 2020

Author: Al-Rammahi Ali. A., Sari Farah , Al-Jelaihawi. Fahad. G

Journal: IEEE

Summary: a patient who has fully recovered from COVID-19 can help patients currently fighting infection by donating plasma. Because it is an infection killer, the plasma now contains antibodies against COVID-19. These antibodies provided the immune system with one way to fight the virus when it was sick, so plasma can be used to fight diseases. Therefore, this paper monitoring recovering patients based on the clustering of data and classifying them using fuzzy hierarchical clustering to reach the plasma as soon as possible.