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**Smart Application for Food Donation Using Cloud Computing**

*Sanjay Agrawal\**, *Sarjerao Deshmukh\*\**, *Rohit Rawade\*\*\**, *Mayuri Desai\*\*\*\** and *Pooja Deshmukh\*\*\*\*\**

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**ABSTRACT**

*Food is necessary for everyday life. The task of food donation is to donate food from various donors and store the data in the database to donate the food to the needy people or orphanage. The problem is not the insufficient number of donors, but finding willing donors at the right time. We want to build a network for peoples who can help each other when peoples are hungry. This application time updates the information regarding the donors where the administrator accesses the whole information about food donation system. A donor, needy people or orphanage will be prompted to enter an individual detail, like name, phone number, and address on the cloud. Food donation Application provides a list of food donors in your area. Only a registered person with a willingness to donate food will be able to access the service. In this application, we are using a GPS technology that will be used to trace the way of donors.*

**Keywords:** *Cloud Storage; Food; Web Services; API.*

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**1.0 Introduction**

We want to build a network for peoples who can help each other when peoples are hungry. This application time update the information regarding the donors where the administrator accesses the whole information about food donation system. A donor, needy people or orphanage will be prompted to enter an individual detail, like name, phone number, and address on cloud.

**2.0 Literature Survey**

Blood bank app provides the required information in no time and also helps in quicker decision making. Only a registered person, with a willingness to donate blood, will be able to access the service. Authors are using the GPS technology that will be used to trace the way to the blood bank[1]

The blood bank can notify the donor in case of emergency. The blood bank collects the blood from different blood banks and he will

inform if less. The application also provides the information about different events so that the user will get information about the organized donation camps [2].

Blood donor application helps healthcare centers to provide the blood as quick as possible when their stocks are insufficient. The application sends periodically actual location information of available donors to the main system and the blood requests to the donors. This optimization makes the system more realistic [3]. In this paper, authors had proposed the use of mobile and web technologies to add another option and medium for emergency response. The proposed method used the current trends in mobile and web technologies for fast and efficient dispatching of emergency units.

Proposed system supposed to lessen the response time it takes to respond to emergency events [4]. In this paper, authors had proposed an efficient and reliable blood donor information and management system.

This system would be the solution for the problems such as wrong information about donors, misuse by third parties.

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\*Corresponding Author: Department of Computer Engineering, MMIT, Lohagon, Savitribai Phule, Pune University, Pune, Maharashtra, India (E-mail: rajkumarmashalkar@gmail.com)

\*\*Department of Computer Engineering, MMIT, Lohagon, Savitribai Phule, Pune University, Pune, Maharashtra, India

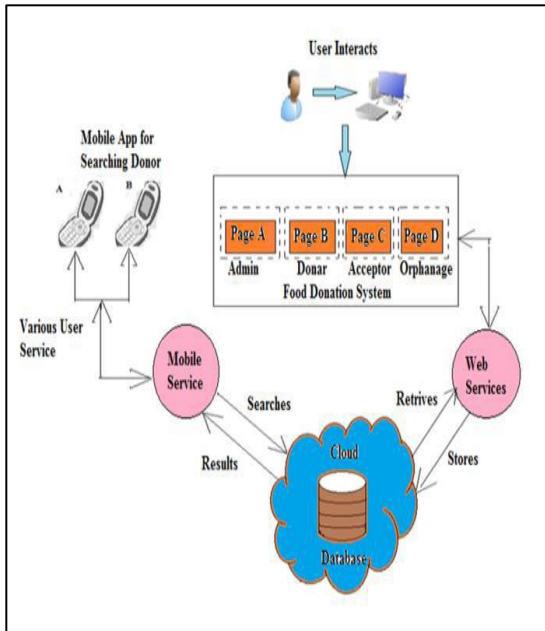
\*\*\*Department of Computer Engineering, MMIT, Lohagon, Savitribai Phule, Pune University, Pune, Maharashtra, India

\*\*\*\*Department of Computer Engineering, MMIT, Lohagon, Savitribai Phule, Pune University, Pune, Maharashtra, India

\*\*\*\*\*Department of Computer Engineering, MMIT, Lohagon, Savitribai Phule, Pune University, Pune, Maharashtra, India

There would be secure BTS where strangers can't misuse the details of donors and where strangers can become a helping hand for life at an emergency situation [5].

### 3.0 System Architecture



### 4.0 Server Setup

We use our Cpanel Hosting for Server Setup, We are using an API to save and call data from our cloud storage, Food Donar can place his or her remaining food on the app and this data will appear in our cloud then the user can find the donor in their near location using GPS system.

In food donation application, User [Admin, Donar, Acceptor, Orphanage and anyone else] will be first register and login with our app using web service. All users register and login data store on cloud. If user successfully login with application, the app get message with on GPS access (Yes/No).

If any user want to donate food with anyone else, application finds nearest location path (using shortest path algorithm) and also user set geo-fence area with specific radius, all nearest location pin on map who uses this application.

User can send request to nearest location using Google map service and according to requirement of food acceptors (any) can send

request or share location to donor then interacting with donor. According to near location and requirement donor donate the food with specific acceptor with finding path.

1. To develop a network where the cost for delivery of food to various places is minimum.
2. For minimizing the wastage of food in daily life that reduces many diseases that make a healthy young generation.
3. To donate food to the orphanage and needy peoples.
4. By this work orphanage children lives healthy life by providing nutritional support to the body.

### 5.0 Mathematical Models

$$S = (G, I, \partial, O)$$

Where,

$$G = \text{GPS}$$

GPS stands for Global Positioning System. The GPS is owned and operated by the U.S. Department of Defence but is available for general use around the world. It is used for tracking the position of users.

$$I = (PD, SD)$$

It stands for inputs to the system.

$$PD = \text{Place Directory (Acceptor-place)}$$

$$SD = \text{Smart Distance (Distance from donor to acceptor)}$$

$$\partial = (\partial_1, \partial_2)$$

It stands for relation between two-end entities.

$$\partial_1 = I_1 \rightarrow O_1$$

$$I_1 = (\text{Hotel, Bank, Marriage Hall, Home, Restaurants})$$

$$O_1 = (\text{Phone-no, Address, Name, Reviews, Ratings})$$

$$\partial_2 = \text{Cal}$$

$$\text{Cal} = (R, D)$$

$$R = \text{Routes } (R_1, R_2, R, \dots, R_n)$$

$$D = \text{Distance } (D_1, D_2, D_3, \dots, D_n)$$

$$\text{Source} = \text{coordinates [Source]}$$

$$\text{Optimal Distance [Source; C]}$$

$$C = \text{City Destination}$$

$$\text{If } (R == \text{Null})$$

$$\text{No Route}$$

$$\text{Min -Distance} = \min [\text{Source}, C]$$

$$O_2 = (\text{Min - Distance})$$

$$O = (O_1 + O_2)$$

## 6.0 Conclusions

This app can be used for food donation when little extra have to donate to needy people with this thought we are building this app for food donation. In this, we are adding in future like video calling, voice messaging, security and focus on loyalty and food quality.

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