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A Review Paper on Annapurnata: An Online Food Donation Application

Prof. S. A. Nalawade, Amol More, Abhishek Zodge, Mayuresh Hivarekar, Sachin Bhujbal
Department of Informtaion Technology, Dr. D.Y.Patil Institute of Technology, Pimpri, Pune, India

Abstract: ***Nutrition stands as a fundamental human requirement, yet in light of the growing population and the country's progress, food wastage has reached unprecedented levels. Consequently, effective food waste management has the potential to enhance both environmental sustainability and the economic landscape. There are many peoples who wishes to donate food but don't know how exactly they can donate the food to needy ones. So, our application revolves around helping the needy people by connecting NGO's and common peoples. Donor and recipient can insert there information and register themselves on the app. The NGO will get the detail of the person wishing to donate via our application and thus network established between donor and NGO. Our application aims to bring about transparency and smoothness in the process of donation of food.***
Keywords: Food Wastage, Donate, Android Application, NGO.

I. INTRODUCTION

In today's world food wastage is one of the main real-time problem that most of the peoples are facing. Currently food wastage is continuously growing, food donations can be very effective solution for this problem. In a densely populated country such as India, food wastage presents significant challenges and issues. It's clear that a significant number of individuals are discarding edible food in the trash, even when it's still perfectly suitable for consumption. Food wastage not only reflects issues related to hunger and environmental concerns but also signifies a range of economic challenges. Instead of wasting food, we can donate it to various organizations such as old age homes, orphanages and street beggars also to hostel students, etc. Peoples, Charities wants to donate food but it is really difficult to connect with the needy ones without any 3rd party person or any other resource in-between. Our application offers a simple solution to address the issue of food wastage by bridging the gap between food donors and those in need. This app effectively curbs food wastage, leading to a reduction in surplus food. Rather than wasting food, clothing, and other items, we should consider donating them to NGOs or other organizations with a shared mission. The motivation for this android app is "Share some happiness". Non governmental organizations (NGOs) could possess this data to efficiently distribute this substantial surplus of food to a significant portion of the population. This application will not solely concentrate on food waste but will also tackle the concern of transportation of food via using map location service. And, it will also help to gain peoples interest by providing them something such as a gift voucher for their great work of food donation. It will also notify the receivers that someone has just added some data about food for donation.

II. LITERATURE SURVEY

Title: Seva: -A Food Donation App for Smart Living
Year: 2021
Author: Christina Varghese, Aparna S. Varde, Drashti Pathak
The article discusses a mobile application designed to minimize food waste in restaurants, events, and cafeterias. This article describes how SeVa acts as a bridge between food suppliers and consumers, allowing them to edit accounts to share information. Food suppliers can input details regarding the food they desire donate, including type, quantity, and expiration date. To ensure the food remains fresh upon delivery, it considers geographic and temporal constraints.

Title: DOVIR: Virtualizing Food Donation Distribution through
Mobile Application
Year: 2021
Author: Divy Chhibber, Aditi Tripathi and Sandip Ray
DOVIR This smartphone app is a charitable initiative created to ease the struggles of homeless individuals who rely on food for their survival. DOVIR connects donors with food-insecure communities, inspired by ride-sharing matching.

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It lets food insecure entities request donations, helps donors find recipients, and ensure a transparent supply chain. The smartphone app manages interactions, and a cloud-based backend handles inventory and supply chain. The algorithm used for DOVIR is based on cloud supply chain management.

Title: FoodX: -A system to reduce food waste
Year: 2018
Author: Oktaviana R Shinta, Ambare
This research's goal is to develop a system connecting communities with individuals and organizations willing to donate excess food. To ensure quick user feedback, FoodX used a prototype methodology for system creation. In the final development stage, testing involved volunteers and three communities to assess feature completeness. The FoodX system caters to the needs of both community segments, whether or not volunteers are involved. As a result of its capacity to mitigate Time for progress and multiple revisions Incorporating user participation into this method simplifies active engagement of the user in the system development process.

Title: Foodernity: -A Mobile & Web Application for Food Sharing
Year: 2021
Author: John amel R. Morilla, Emeliza R. Yabut, Carl Daniel A.
Patio, Mark Kenneth Dela Cruz, Fhillip Carl Bagsic The paper addresses the pressing issue of food insecurity in low income areas and its consequences, such as hunger, poor nutrition, and health problems. Non-profit organizations rely on food donations to combat these challenges. The study introduces **"Foodernity"** is a web application and mobile app designed to alleviate food insecurity, particularly During periods of emergency such as the COVID-19 pandemic, and reduce food waste. The development process follows the Agile Model, and the study recommends beneficiary evaluation for functionality. The application enables online donor interaction and inventory management while aiding needy individuals. Ultimately, this initiative has the potential to attract donors, reduce hunger, and minimize food waste. The advantage of it is that it works on both app as well as web.

Title: -A Food Wastage Reduction Mobile Application
Year: 2018
Author: Hadeel A. Tabaza, Ayesha Anzer, and Wedad Ahmed
Efficient food resource management plays a pivotal role in both environmental preservation and economic growth. This article introduces an Android application designed to facilitate restaurant owners in making food donations and redistributing excess meals to those who require them. Through this app, users can complete actions like registration, login, browse available food items, add new products, adjust item quantities in their cart, remove items from their cart, and securely log out of their accounts. The application relies on Firebase databases for data storage, allowing NGOs to track the collective food donations made by various users, with a primary focus on food conservation.

III. EXISTING SYSTEM

Current web-applications are giving really gradual responses in fetching real-time location and they are difficult to maintain because every time user flushes DNS then all the permission will reset to null. There are currently various existing applications of food donation system but they contain some problems or some problems are not solved by those applications which includes, No feedback from recipient and some loop holes like security issues. Currently peoples who wish to donate food have to meet NGO's personally and then donate food. Also, in some applications no notification system is available in case of new donor registers some food to donate. No customer engagement is provided in current applications which are a main reason for suppliers to not donate food online. There is also lack of food testing in these applications which may cause donating wrong food to peoples affecting their health. No quantity measure is used in these applications while donating food. There is no security included in these applications such as taking details of the driver who is going to pick up the food. No food testing mechanism is included in these applications. As food testing is important factor in food donation to check quality of food so it is really essential to check whether donated food is healthy to eat or not. There may be disparities in the types and quantities of food donations made by different donors. Cannot be used for receivers who are not having smart phones. Not all individuals facing need may have the means to access smartphones or the internet, limiting the reach of the app. This can result in leaving out vulnerable populations who could benefit from food assistance.

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Table 1. Specifications of the current systems and its outcomes

AUTHOR	JUSTIFICATION	DRAWBACKS
Hadeel A. Tabaza, Ayesha Anzer, and Wedad Ahmed	An mobile application that enables restaurant goers to share excess food with people who require it	No system foe updating if food exchange happened or not
Divy Chhibber, Aditi Tripathi and Sandip Ray	An app for charitable purposes is in development to alleviate the challenges faced by homeless individuals who depend on food for their survival.	No in-between transportation service available
John amel R. Morilla, Mark Kenneth Dela Cruz, Fhillip Carl Bagsic, Carl Daniel A. Patio, Emeliza R. Yabut	A Novel Method for Reducing Food Waste Using both web as well as app.	The extra food can only be taken by NGO's.
Drashti Pathak Christina, Varghese, Aparna S. Varde	SeVa act as a bridge between food suppliers and consumers, allowing them to donate food according to their wish.	No location access is taken to pick up and drop food at locations.
Shinta Oktaviana R, Ambare	This research's goal is to develop a system connecting communities with individuals and organizations willing to donate excess food	No notifying to consumers when supplier adds food to donate.

IV. PROPOSED SYSTEM

The proposed mobile application offers a solution to address both food waste and food poverty by enabling users to donate excess food. Excess food often goes to waste at events like weddings, in canteens, restaurants, social gatherings, and family functions. Our initiative leverages social innovation to redistribute surplus food, a proven approach that has made significant strides in combating food waste and alleviating hunger among those in need. The suggested Androidbased application is going to be implemented using Android Studio, Java, XML and firebase needs internet connection and will allow contributors and seekers to go on home page. After a successful registration with the system, the real-time database is continuously updated whenever a user makes a food contribution. Extensible Markup Language (XML) is employed to create dynamic web pages that can be tailored to meet specific requirements. The NGO or a certain person i.e., admin can check how many users have registered in this application with the help of real-time database. The suppliers can add their pickup location from where food is going to be picked up. A map API is used to get location access and to specify the location of donor and receiver.

The app also takes Aadhar card details and other personal details about the donor in case of any fraudulent calls or mis-chives. Also, this app contains an interesting feature of giving coupons to suppliers once they donate the food so that it will create interest in donor side and he/she will donate food continuously after a period of time. Also, the app contains a feedback mechanism to give feedback about the food whether it is good or not. A penalty applying mechanism is also included in app in case of some issues are noticed.

V. SOFTWARE AND HARDWARE REQUIREMENTS

The software requirements: - We employed XML for the front-end, utilized JAVA for the back-end, and harnessed Firebase for storage. The Android-specific tools that were integrated into the project encompassed IDEs such as Android Studio, Android Emulator, and Firebase.

The hardware requirements: - The system prerequisites include an Intel 3 processor, 4 GB of RAM, a 500 GB hard disk, compatibility with Windows 7, 8, 10 (64-bit), and an Android mobile phone for running the application.

VI. CONCLUSION

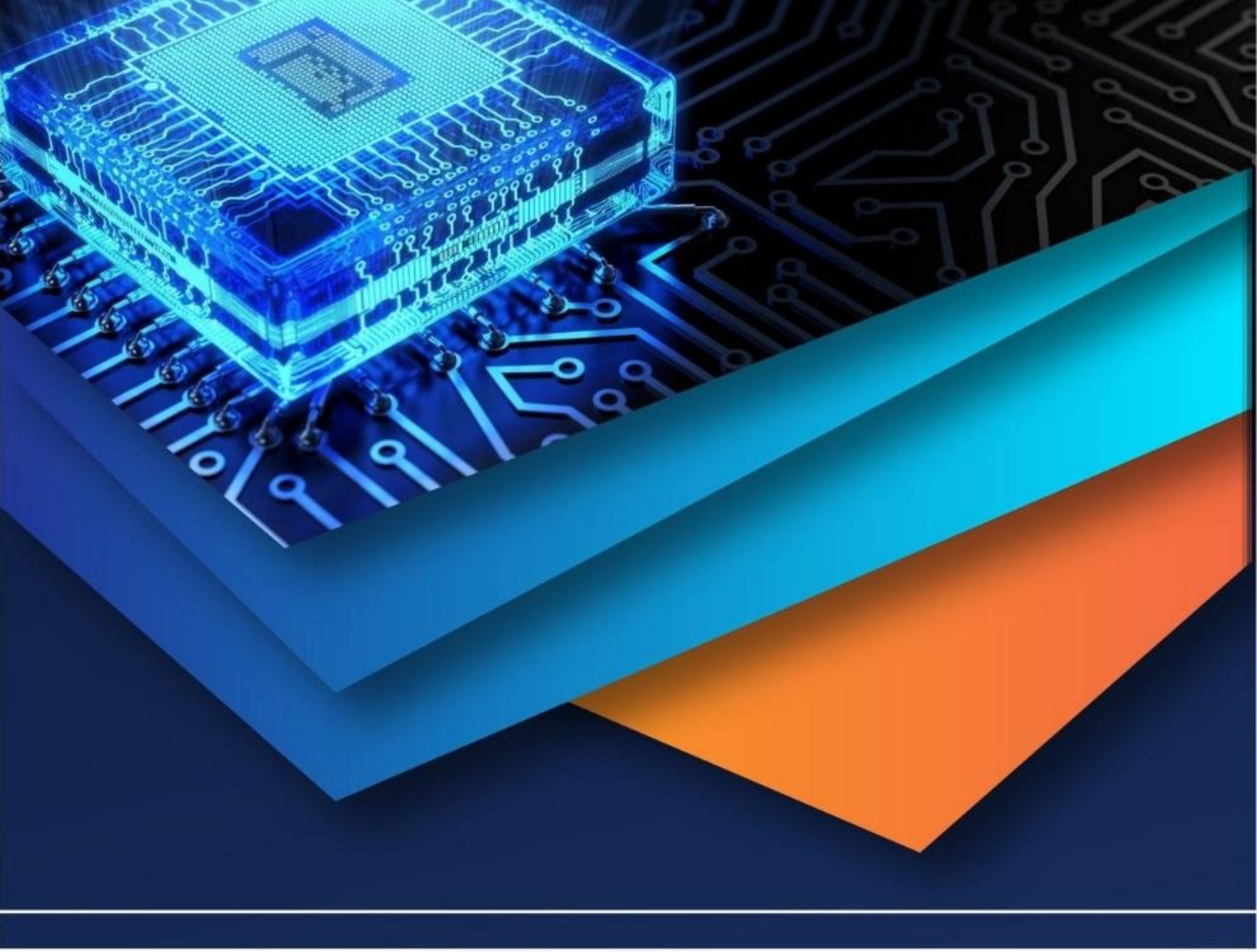
The Annapurnata app, developed with help of Android Studio, serves as a platform for users to participate in food sharing and donation. To get started, new users must register within the application. Upon logging in, visitors can contribute food items by specifying their details, including item type, quantity, phone number, and Aadhar number. Additionally, the app automatically detects the user's location. Recipients can search for available meals in their local vicinity and place food requests. NGOs or recipients can then contact the donors to coordinate the food donation, ensuring effective communication. Donors have the option to decline the request if necessary. After the successful exchange and delivery of food to the recipient, users can leave reviews. This application has the potential to make a significant impact in the fight against malnutrition, hunger, and starvation, emphasizing seamless food sharing and user engagement.

VII. ACKNOWLEDGMENT

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