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ENHANCING TECHNIQUES FOR FOOD STOCK OPTIMIZATION

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ABSTRACT

Food waste production is on the rise, and this is a national and international issue. It has several aspects, all of which stand to gain from a comprehensive grasp of the volume and kind of food waste produced over the whole food production and consumption cycle. The effect that food waste has on the production of greenhouse gas emissions, such carbon dioxide and methane, is the main source of worry for many stakeholders. However, there is also rising interest in using food waste as a resource input for agriculture, as well as growing worries about the environmental and economic sustainability of the current food waste disposal systems. In this project, we can put in place a food waste management system to raise awareness of food wastes and the harmful effects of undesired, underused human trash and junk. We can also create a system for knowledge-based management that ensures wastes are effectively managed with the least amount of waste possible and yields useful results. We can implement two types of modules such as admin and user module. Admin module can be collecting all food details with location information and also orphanage home details. And managing food wastage with proper delivery to poor people or proper disposal management. User module can also post address to collect wastage foods from their locations. This project can be implemented in real time as software for user friendly access.

Keywords: E Admin, Trust, Donor

1. INTRODUCTION

Recent years have seen a rise in interest in and discussion about the incidence of food waste, and studies are being conducted to identify practical solutions. It has been seen as a major problem for both the sustainability of food supply chains and the sustainability of food production and consumption. There are two categories of food waste: preventable and unavoidable. Edible food and spoiled/damaged edible food are considered preventable waste, but inedible food such as egg shells, fruit peels, and bones are considered unavoidable waste. According to a study, homes in Finland squander 5% of the food that is purchased, with each individual wasting 20–30 kg of food on average annually. Every year, homes squander between 120 and 160 million kilogrammes of food on average. Wastage in the home might be purposeful or not. A large portion of food waste in homes may be the consequence of neglecting to check food expiration dates. Due to the frequent sales at cheap stores, people in high-cost nations are more likely to purchase food that is almost expired.

2. RELATED WORK

Puneet Kaur, et.al,...[1] evolved Recent studies by academic experts have shown the amount of food that is wasted at school food service facilities. To overcome the difficulty presented, more precise inputs are needed. This study's goal is

to conduct a review of the field's previous literature in order to lay the groundwork for further investigation. In order to do this, the authors employed a thorough search strategy to find 88 relevant studies that they could analyse and critically synthesise. Few studies have been done on food service facilities at universities, according to the research profile of the chosen papers. Geographically speaking, the study is also less scattered, mostly concentrating on the United States. After that, the writers used text analysis to pinpoint seven themes that served as the foundation for organising the results of earlier research. Food waste drivers, food waste quantitative assessment, food waste behavioural assessment, operational strategies for reducing food waste, behavioural change interventions to mitigate food waste, food diversion and food waste disposal processes, and obstacles to the implementation of food waste reduction strategies are the main themes of the reviewed studies.

Madiha Saba1, et.al,…[2] symbolises the website's goal of reducing food waste by giving food to people in need. There is a serious issue with individual's waste more food than they are eating in the modern world. With an annual food waste of over 68.8 million tonnes, India comes in second place in the world. The goal of this idea is to solve the issue of food waste. It will function as a request and answer system for NGOs and restaurants. Restaurants ought to disclose the amount and shelf life of their food. Before food expires, NGOs should gather restaurant leftovers and provide them to people in need. Additionally, eateries can publish information about food donations. Source reduction refers to reducing the amount of food waste generated before it occurs, whereas food recovery highlights the focus on producing food waste away from landfills. This suggests that feeding hungry people—or, in a sense, providing nourishment recovery through gifts—is the most popular redirection tactic. When food is left over from events like weddings, parties, and restaurants, it can be donated to the underprivileged and hungry. This strategy links these NGOs and Donors with the explicit objective of feeding the underprivileged people. Contributors that use this method communicate with nearby NGO's and provide information on all aspects of food waste, such as food kind, amount, and serving time (during which food should be collected by NGO and distributed to impoverished individuals). Until the recipient picks up the food, the donor can follow the person dispatched through the NGO using the provided data.

Ganesh Sawalkar, et.al,…[3] utilised One significant subset of intelligent transportation systems is an intelligent logistics system. Developing effective technologies and processes to increase performance in satisfying customer expectations is a huge problem, because it has a direct impact on people's quality of life. Because of its great efficiency, food firms may become more competitive, increase food quality and safety, and minimise food waste. This study looks at innovative integrated planning for systems that provide intelligent food logistics. Eliminating food waste in our world today involves using local food sources, such as perishable goods that aren't consumed completely within the allotted time or leftover food items in stores, restaurants, and food distribution centres that may be about to expire. This is very important, especially in times of crisis like the COVID-19 epidemic. In order to address poverty and food waste, this article focuses on developing an engaging mobile application (app) that offers a widely used platform where users may visualise the food resources that are accessible in their neighbourhood and subsequently acquire access to food.

Dhruv Panchal, et.al,…[4] created a smartphone application that lowers the quantity of food wasted at events, restaurants, and in the mess. The app allows users to donate and collect food, as well as communicate directly with local non-governmental organisations. The following information must be supplied for food donations: food specifics, the location of surplus food, the type of food, and the amount of food available. Alerts sent right away to volunteers, local NGOs, and orphanages to pick them up. A recent analysis found that just one-third of the food produced is eaten, and that 1.3 billion tonnes of food are wasted annually. There is less food waste because to this application. Additionally, it makes it possible to communicate directly and obtain information on food availability from volunteers and NGOs. Food waste is a worldwide ethical problem. Roughly one-third of all food produced annually for human use is lost or wasted, according to the Food and Agriculture Organisation (FAO) of the United Nations. Every food item thrown away is a missed chance to reduce world hunger and increase global food security. Food waste is defined as food supplies (grains, vegetables, poultry, and meat) or beverages that were intended to feed humans but are currently lying in landfills as trash even if they are fit for human use. Food that is thrown out is usually rotten or expired as a result of carelessness, bad stock management, and economic behaviour. This is taking place in industrialised, developing, and impoverished nations, with each making a greater contribution than the others.

John Harvey, et.al,…[5] Mobile applications for sharing food are growing in popularity, but little is known about the novel social configurations they create, especially for those that exploit users as willing middlemen in supply chains. This

article describes a social network study, carried out in collaboration with OLIO, of a mobile application for food sharing. The study focuses on longitudinal social network data that was gathered over a 10-month period, consisting of 54913 occurrences of food exchange involving 9054 individuals. The findings demonstrate that donor-recipient reciprocity and balance are uncommon, challenging the viability of existing theories of food sharing (reciprocity, kin selection, tolerated scrounging, and costly signalling), but they also demonstrate the emergence of genuinely novel social relations between organisations and consumers that deviate from conventional linear supply chains. The results have important ramifications for managers and legislators who want to promote, assess, and comprehend technology-assisted food sharing practices. Although sharing and redistributing food is a typical occurrence in communities, there are changes in the ways that individuals do this (Jaeggi & Gurven, 2017). Food commodity lifecycles from production to disposal might be severely disrupted by the rise of food sharing websites and smartphone applications (Falcone & Impart, 2017). Food waste seems to be framed by peer-to-peer (P2P) technology as an optimisation issue—a straightforward inefficiency brought on by a deficiency in customer coordination. In actuality, our understanding of the structure of these redistribution mechanisms is rather limited.

3. EXISTING METHODOLOGIES

Food waste resulting from illnesses, spoiling, leftovers from restaurant dishes, and plant and animal debris from processing is unfit for human consumption. These work well for composting. It is possible to recover and eat other garbage. Edible crops left in fields after harvest, spoiled food, extra perishable food from caterers or restaurants, and extra packaged food from retail food stores are a few examples of waste that can be recovered for consumption.

4. PROPOSED METHODOLOGIES

Food waste is becoming a more pressing issue because of its detrimental effects on the economy and the agriculture sector. Households appear to be the biggest producers of food waste, according to research, and part of this is due to food being thrown out because it has expired. This thesis' primary goal was to offer a workable system that enables customers to effectively track the life cycle of their food inventory.

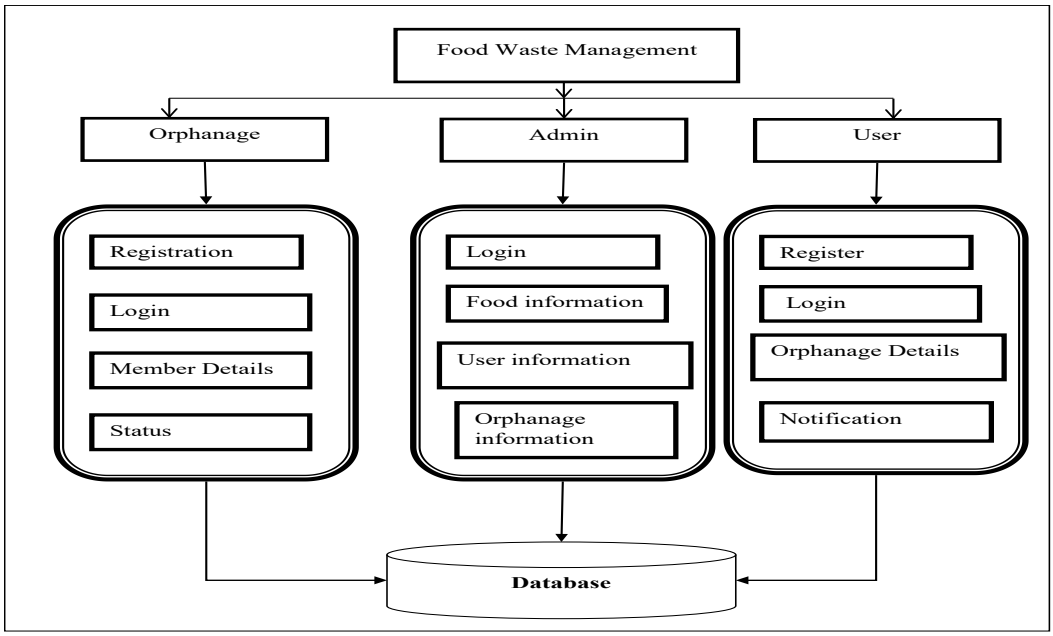

Figure 1: Flow of Heart Disease prediction

1. Admin

Login

This module handled by admin who has all control in charity management System. Admin has unique user name and password. Admin can view the both user and trust details.

View Trust Details

In this module used to view the trust details. Details Such as Trust name, location, contact no, address etc. after the trust registration process the request is sent to the admin. Admin can verify the trust details.

Approval Process
After the verification process the admin can approve or reject the trust request.
View User Details
In this module used to view the user details. Details Such as user name, contact no, address etc,

2. Trust
Register
In this module trust register the details such as trust image, name, trust location, phone number and member details. After that he get user name and password for enter into the system. Trust can view their donor details.
Login
In this module, trust can login the system using his/her username and password. Approved trust only can login in this system.
View Donor Details
In this module used to view the donor details. Details Such as Donor name, contact no, address etc.

3. Donor
Register
In this module, donor registers their details such as name, age, gender, phone number, address and location so on.
Login
In this module, User can login the system using his/her username and password. Registered user only can login this system.
View Trust Details
In this module used to view the trust details. Details Such as Trust name, location, contact no, address, education help details etc.
Donate
After viewing all trust information the user can donate the particular trust.

5. CONCLUSION

This project's approach is practical enough to prevent food waste from expiry. Still, many customers could find manually entering their inventory into the programme to be a hassle. As of the time of writing, food packaging did not have a standard food information system that provided the user with the name of the product as well as its expiration date. The project's admin module may gather information about all food items, their locations, and the data of orphanage homes. And managing food wastage with proper delivery to poor people or proper disposal management. User module can also post address to collect wastage foods from their locations. This project can be implemented in real time as software for user friendly access.

CONFLICT OF INTERESTS

None.

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