

Mobile Application for Excess Food Donation and Analysis

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ABSTRACT: To develop an android application that reduces the amount of food wastage produced in restaurants, functions and mess. The current system only provides information on amount of food wasted and does not provide an interface to donate and provide data analysis. Using data analysis, to visualize the impact. Donating the excess food that consists of the following details, first, providing the location of where excess food is available & details of the food quantity available. Immediate Alerts to nearby NGO's, orphanage, volunteers to collect them.

KEYWORDS: Mobile Application, Food Donation, Excess Food

I. INTRODUCTION

According to a recent survey, 1.3 billion tons of food is being wasted each year and One third of food consumed are leftover. To produce a system that reduces the amount of food being wasted The focus of the project is to develop an android application that uses data analysis to visualize the impact of excess food, thus reducing food wastage. It also enables to give away the excess food produced by notifying the nearby users (NGO's, Volunteers) with details of the food available. Required users can claim it and it gets allocated based on priority. Report generation and graph generation.

II. LITERATURE SURVEY

In the base paper, an automation is built with four modules which focuses on accounting the quantity of food being wasted, it is focused on creating an awareness by feeding the live data on how much food is being wasted, it uses a database to store the quantity of food being wasted each day and later the presented data is represented in graphs in order to encourage the students to reduce the wastage of food. The automation modules are connected to the central data store, the people counter module counts the number of students eating followed by the weighing scale module records the weight of the food wasted and sends the details to the central data store using the Wi-Fi dongle. This data sent is displayed as a live feed using a LED display and further the data in the central data store is used for representing as graphs.

From the supporting papers, first the paper focuses on an effective job scheduling; first the resources need to be identified, focusing on the goal that is the purpose. The scheduling module focuses on the requirements and then allocates the resources as needed. Therefore, it focuses on providing the resource to the required. The other supporting

paper focuses on generating a report based on the text data. The data required is mined from the available algorithm and only the required information is filtered. The content based filtering helps to recognize only the needed information and generates the needed report.

International Journal of Innovative Research in Science, Engineering and Technology

(A High Impact Factor, Monthly, Peer Reviewed Journal)

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Vol. 7, Special Issue 4, April 2018

III. EXISTING SYSTEM

This paper provides a new automated measuring and accounting system, which helps discover trends in food wastage by correlating the food wastage with various other parameters like number of people generating that food, day of week and time of day. The another part of this paper is an LED display that presents the gross food waste that has been generated, associated cost of the food being dumped and an online portal wherein people can get more detailed information using easy to understand graphs and charts.

The system eBin consists of four sub systems. 1. Food Waste weighing system 2. People Counting system 3. LED Display system 4. Online Web Portal all these components are connected to each other via central entity which acts as data store cum data provider. In the overview of the system block of weight machine measures the waste dropped in the waste bin under which the weight machine is kept. The weight is measured every second. The values read by the machine are sent over the network to central data store. When user comes to take his/her meal, he picks his/her mess-card and drops in the box. The box, fitted with IR sensor, senses the drop and records the value. This value is then sent to the central storage if it is connected to the network, or else stored locally to allow batched updates when network comes up

IV. PROPOSED SYSTEM

Mobile Application for Food Donation provides an interface for communication for users who are looking for a medium to give away the excess food instead of throwing it away. The registered users have two options they can choose from, either they can donate the excess food or they can claim the donated food. First, if the user is looking to donate food, after logging in using username and password., they need to share the following information 1) The excess food details: food quantity, food name 2) Location of the user presented using GPS (Global Positioning System) 3) Contact details that is phone number of the user to contact and also the address where to receive the excess food. If any user chooses to claim the excess food, the user needs to share details of his personnel that is which organization he belongs to and the number of people that are present and with the location. All the users that claim are sorted based on priority based job scheduling. After successful donation of excess food, the data analysis comes in. To visualize the impact of the project, graphs are portrayed. One focusing on the number of people fed and other focusing on the food quantity saved. Success Rate is later calculated based how it has impacted on reducing the hunger rate.

The various modules in this application are:

1. Signing up and login
2. Donating the excess food
3. Claiming the excess food
4. Priority based sorting
5. Data Analysis with Graphs
6. Data Analysis with Reports

Signing up and login: The users of the application have to sign up with their email id, name, contact number and address as part of registration. The user has the leisure of editing these details whenever the user opts to. The location of the user can be saved for user convenience for quick tagging of location.

Donating the excess food: After successfully logging in, the user has to choose whether he chooses to donate or claim the excess food. If he chooses to donate the excess food, he has to enter the following details (name of the food, quantity of the food, location of its availability and also the user's contact number). Additionally, the user can mention the time of availability.

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Vol. 7, Special Issue 4, April 2018

Claiming the excess food: After successfully logging in, the user has to choose whether he chooses to donate or claim the excess food. If he chooses to claim the excess food, he has to enter the following details (name of the volunteer or the organization the user belongs to, number of people the food to be donated, location of the organization and also the user's contact number). All the users claiming the excess food are alerted to the donating user.

Priority based sorting: After multiple users choose to claim the excess food that is available, the claims are sorted based on priority on which has suit the claim better based the number of people to be fed and the distance of the location. After sorting, the donating can choose from the best suited claimers that the user chooses to donate it to.

Data Analysis with Graphs: After each successful donation, the data gets recorded. With the recorded data, the impact of this application is visualized inform of graphs. One focusing on the number of people fed in total and the quantity of food been saved from wastage. These graphs focus on the positive effect of donating.

Data Analysis with Reports: After all the data gets recorded. With the recorded data, the impact of this application is visualized inform of reports. The report presents the details on the total quantity of food donated, the total number of people fed and shows the impact of the project.

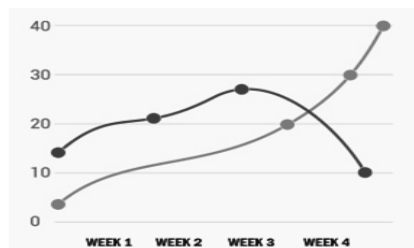


Fig. 2 Graph generation of excess food donated

V. METHODOLOGY USED

Step 1: Input the processes along with their burst time (bt). Sort all the processes in increasing order according to burst time. That is the number of different claims that are available for the excess food that is been updated with the distance and time to receive the excess food that is available.

Step 2: Find waiting time (wt) for all processes. As first process that comes need not to wait so waiting time for process 1 will be 0 i.e. $w_t[0] = 0$. Depending upon the time of availability that is the waiting time, the user gets constrained whether the excess food could be provided to the user.

Step 3: Find waiting timefor all other processes i.e. for process I, $w_t[i] = bt[i-1] + w_t[i-1]$.After finding out the distance based time provided to each user, the user with lesser waiting time is prioritized

Step 4:Find turnaround time for all other processes:Turnaround time = waiting time + burst time for all processes.

Step 5: Find average waiting time = Total waiting time / no of processes. Similarly, find average turnaround time= Total turnaround time / no of processes.

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VI. CONCLUSIONS

The excess food produced in functions gatherings can be easily donated. Visualization of the impact of donation has a positive impact on the users. An effort focused on feeding the hunger and minimizing food Wastage at the same time. An Application which can used to donate or claim the excess food. Donating the excess food that provides the location of where excess food are available & details of the food quantity available and sends immediate alerts to nearby NGO's, orphanage, volunteers to collect them.

REFERENCES

- [1] Varsha Jain (2016) "An Automated Food Wastage Tracking System for Dormitory Student's Mess", International Conference on Internet of Things and Applications (IOTA)
- [2] Karthika, Somu.C.S(2016) "A Multilevel Approach for Generating Report based on Information Filtering ",International Conference on Electrical, Electronics, and Optimization Techniques
- [3] Swachil J. Patel, Upendra R. Bhoi (2014), "Improved Priority based Job Scheduling Algorithm in Cloud Computing using Iterative Method", Fourth International Conference on Advances in Computing and Communications