

Review on Literature Survey Share My Food Application

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Abstract:- India is one of the top most countries that wastes huge quantities of food every day. In fact, one statistical figure based on a survey declares that India wastes as much food as United Kingdom consumes...! And this can easily be proved by our overflowing streets, garbage bins and landfills in and around the city. the wastage is also visible across marriages, canteens, hotels, public functions, social/family events and households.

According to the United Nations Development Program me, nearly 40% of the food produced in India goes waste. For ex: nearly 21 million tons of wheat go waste in India. It is also estimated that more than 50% of all the food produced across the world meets the same fate, and unfortunately, never reaches the needy.

In fact, according to one of the reports by the Dept. of Agriculture, approximately fifty thousand crores worth of food produced in India's wasted every year. Off late we have seen, in India, bigger the wedding, larger the party and greater the waste. But, it's the same case with most of the restaurants and hotels as well. hey contribute equally, if not more, to the food wastage.

While some restaurants in India employ food controllers to check food spoilage/wastage, others donate it to their staff and the needy. Also, smaller restaurants donate it to orphanages and other public utility arenas so as to reach out to those who actually are in need of food.

INTRODUCTION.

Food wastage is one of the biggest problems all countries face. According to a study, up to 40% of the food produced in India to waste every day. The wastage is even more during weddings, festivals and also in hotels. On the other hand, many children die every day due to malnourishment. There are many NGO's which are working hard to make sure such food reaches the poor and needy people. But connecting the NGOs with people is a difficult task. Thus, we propose to implement an android app to connect people who want to share extra food and NGO's who can pick it up and distribute to the NEEDY. INDIANS waste as much food as the whole of United Kingdom consumes a statistic that may not so much indicative of our love of surfeit, as it is of our population. Still, food wastages an alarming issue in India. Our street and garbage bins, landfills have sufficient proof to prove it. Weddings, canteens, hotels, social and family functions, households spew out so much food. According to the United

Nations Development PROGRAM, up to 40% of the food produced in India is wasted. About 21 million TONS of wheat are wasted in India and 50% of all food across the world meets the same fate and never reaches the needy. In fact, according to the agriculture ministry, INR 50,000 crores worth of food produced is wasted every year in the COUNTRY. IN India, the bigger the wedding, the larger the party and the more colossal the waste. No doubt weddings and banquets are a huge source of food wastage, but restaurants and hotels also contribute to food wastage, though the awareness around this has grown in the last five years. While some restaurants in India employ food controllers to check food spoilage, others donate it to their staff and other personnel, and smaller standalone restaurants, donate it to orphanages. However, there is no straight forward way for distributing such food amongst the needy. Ease of Use

METHODOLOGY

There are many NGO's which are working hard to make sure extra left-over food reaches the poor and needy people. But connecting the NGOs with people is a difficult task as it has been done manually and we cannot ensure that food is reaching in an estimated time.

Thus, we propose to implement an android app to connect people who want to share extra food and NGO's who can pick it up and distribute to the needy. In the proposed app, the people will be able to post their food information which they want to share. The registered NGO's will be notified about the availability of the food.

MODULES

- A. Login & Registration: This phase involves login & registration for both the guest and Agent. The user's details are maintained confidential by maintaining separate account for each user. At the same time only, the agent can view the details of the register guest.
- B. Notification: This phase involves the notification to the agent by the guest. The user will send the notification which contains the location of food available via notification bar. This is achieved by using notification button.
- C. Admin Module: In admin module, the administrator maintains the agent details as well as the donator details. The administrator collects the food from the agent. The administrator gives the orphanage details directly to the donator.
- D. Donator Module: In donator module, the donator gives the wastage of food to the orphanage. the donator gives the request to the admin for the purpose of to collect the wastage food. The donator views the orphanage details and agent details.
- E. Receiver Module: In Agent module, the Receiver maintain the orphanage details. It can also maintain the donator details. The Receiver give the request to the admin for collect the food from the donator. After collect the food the agent gives the alert message for the donator.

MODELING AND ANALYSIS

ANALYSIS OF EXISTING APPLICATIONS

We analyzed techniques (geolocation, crowdsourcing, quality), phases (collection, distribution), and the focus area for the applications (donation, sharing, storage, etc.). In addition, we have investigated if any of the applications collects data about food waste generation or provides API's. Few applications cover all phases, most focus on consumption phase and few have considered collecting data about food waste generation.

FINDINGS

To carry out a methodological evaluation of the survey findings we investigate whether the applications provide measure for user adoption, awareness and knowledge, needs, engagement and attitude and behavior change in their approaches to fight food waste. We analyze if these applications motivate users be more responsible and if they use persuasive techniques to promote their waste behavior. Moreover, whether they focus on preventing waste rather than managing it. Finally, if the applications focus on user engagement and create a fun environment for the user while interacting with the application.

USER ADAPTION

Consumer to consumer:

There are several initiatives for sharing leftovers and surplus of food between groups of consumers. These

initiatives build communities of people in the same area, willing to share food and reduce waste. We've seen several websites and apps active in England, Germany, Austria, Spain, India and the USA, building communities mostly in bigger cities. Some seem to be successful according to the number of installations.

Retail to consumer:

Some supermarkets in The Netherlands inform customers about food items that almost reach their 'Best before date' and give discounts on these products. Some other apps are used to order takeaway meals from local restaurants, bakeries and collect food that would otherwise go to waste. These apps use the GPS of the mobile device to see if participating restaurants or bakeries are in the neighborhood.

Consumer and retail to charity:

Many local charity initiatives are popping up to donate a surplus of food to a selected charity organization

TECHNOLOGY

Dalvik VM

A modified version of JAVA programming language is used for app development with Dalvik VM used to run the apps on Android devices. Dalvik VM can be viewed as modified version of JVM constrained in terms of memory and processor speed and converts the java bytecode (in form of JVM compatible .class files) to Dalvik compatible .

dex executables before installation. Application Interface & H/W Support Based on Direct Manipulation, the on screen objects have been programmed to respond to real world actions like swiping, touching etc. Boasting of a fast & responsive fluidic touch screen, the OS supports various dedicated hardware like proximity sensors, gyroscopes, magnetometer and accelerometer etc. The Home Screen is analogue to the Desktop in a Windows OS.

Python

Python is an interpreted high-level general-purpose programming language. Python's design philosophy emphasizes code readability with its notable use of significant indentation. Its language constructs as well as its object-oriented approach aim to help programmers write clear, logical code for small and large-scale projects.

Python is dynamically-typed and garbage-collected. It supports multiple programming paradigms, including structured (particularly, procedural), object-oriented and functional programming. Python is often described as a "batteries included" language due to its comprehensive standard library.

Guido van Rossum began working on Python in the late 1980s, as a successor to the ABC programming language, and first released it in 1991 as Python 0.9.0. Python 2.0 was released in 2000 and introduced new features, such as list comprehensions and a garbage collection system using reference counting and was discontinued with version 2.7.18 in 2020.¹ Python 3.0 was released in 2008 and was a

major revision of the language that is not completely backward-compatible and

Python is meant to be an easily readable language. Its formatting is visually uncluttered, and it often uses English keywords where other languages use punctuation. Unlike many other languages, it does not use curly brackets to delimit blocks, and semicolons after statements are allowed but are rarely, if ever, used. It has fewer syntactic exceptions and special cases than C or Pascal

```
def get_month_data_range(months_ago=1, include_this_month=False):
    """
    A method that generates a list of dictionaries
    that describe any given amount of monthly data.
    """
    today = datetime.datetime.now().today()
    dates = []
    if include_this_month:
        # get next month's data with:
        next_month = today.replace(day=28) + datetime.timedelta(days=4)
        # use next month's data to get this month's data breakdown
        start, end = get_last_month_data(next_month)
        dates.insert(0, {
            "start": start.timestamp(),
            "end": end.timestamp(),
            "start_json": start.isoformat(),
            "end_json": end.isoformat(),
            "timesince": 0,
            "year": start.year,
            "month": str(start.strftime("%B")),
        })
    for x in range(0, months_ago):
        start, end = get_last_month_data(today)
        today = start
        dates.insert(0, {
            "start": start.timestamp(),
            "start_json": start.isoformat(),
            "end": end.timestamp(),
            "end_json": end.isoformat(),
        })
```

MySQL Database

MySQL is a world renowned open source Relational DBMS supporting standard SQL. At the server end, it can be configured to provide single user or multi user access to a number of databases and tables. Some of the best features are: cross-platform support, updatable views, cursors, information schema, query caching etc. It can easily be integrated into PHP scripts. It is developed, distributed & supported by Oracle foundation.

```
hg$ mysql
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 8
Server version: 8.0.17 MySQL Community Server - GPL

Copyright (c) 2000, 2018, Oracle and/or its affiliates. All rights reserved.

Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> USE test;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> SHOW tables;
+-----+
| Tables_in_test |
+-----+
```

Java

Java is a class-based, object-oriented programming language that is designed to have as few implementation dependencies as possible. It is a general-purpose programming language intended to let application developers write once, run anywhere (WORA),^[16] meaning that compiled Java code can run on all platforms that support Java without the need for recompilation.^[17] Java applications are typically compiled to bytecode that can run on any Java virtual machine (JVM) regardless of the underlying computer architecture. The syntax of Java is similar to C and C++, but has fewer low-level facilities than either of them. The Java runtime provides dynamic capabilities (such as reflection and

runtime code modification) that are typically not available in traditional compiled languages. As of 2019, Java was one of the most popular programming languages in use according to GitHub,^{[18][19]} particularly for client-server web applications, with a reported 9 million developers.^[20]

Java was originally developed by James Gosling at Sun Microsystems (which has since been acquired by Oracle) and released in 1995 as a core component of Sun Microsystems' Java platform. The original and reference implementation Java compilers, virtual machines, and class libraries were originally released by Sun under proprietary licenses. As of May 2007, in compliance with the specifications of the Java Community Process, Sun had relicensed most of its Java technologies under the GNU General Public License. Oracle offers its own HotSpot Java Virtual Machine, however the official reference implementation is the OpenJDK JVM which is free open source software and used by most developers and is the default JVM for almost all Linux distributions.

As of March 2021, the latest version is Java 16, with Java 11, a currently supported long-term support (LTS) version, released on September 25, 2018. Oracle released the last zero-cost public update for the legacy version Java 8 LTS in January 2019 for commercial use, although it will otherwise still support Java 8 with public updates for personal use indefinitely. Other vendors have begun to offer zero-cost builds of OpenJDK 8 and 11 that are still receiving security and other upgrades.

Oracle (and others) highly recommend uninstalling outdated versions of Java because of serious risks due to unresolved security issues.^[21] Since Java 9, 10, 12, 13, 14, and 15 are no longer supported, Oracle advises its users to immediately transition to the latest version (currently Java 16) or an LTS release.

GPS Based Location Tracker

A **GPS tracking unit, geotracking unit,** or simply **tracker** is a navigation device normally on a vehicle, asset, person or animal that uses the Global Positioning System (GPS) to determine its movement and determine its WGS84 UTM geographic position (geotracking) to determine its location.

Various companies buy position and track data for marketing. Also used for military and criminal, to shut down and pick up repossession/thefts and find truck loads. Tracks can be map displayed in real time, with **GPS tracking software.** smartphones with GPS capability.

GPS antenna size limits tracker size, often smaller than a half-dollar. In 2020 tracking is a \$2 billion business plus military-in the gulf war 10% or more targets used trackers. Virtually every cellphone tracks its movements and per most cell user agreements uploads the track data, creating trillions of sellable locations and tracks, value varies from fractions of a mil to dollars per point and user association.

Locations are stored in the tracking unit or transmitted to an Internet-connected device using the cellular network.

Extensible Markup Language

(XML) is a markup language that defines a set of rules for encoding documents in a format that is both human-readable and machine-readable. The World Wide Web Consortium's XML 1.0 Specification^[2] of 1998 and several other related specifications^[4]—all of them free open standards—define XML.

Android

*Android is an open source and Linux-based **Operating System** for mobile devices such as smartphones and tablet computers. Android was developed by the Open Handset Alliance, led by Google, and other companies.*

Android offers a unified approach to application development for mobile devices which means developers need only develop for Android, and their applications should be able to run on different devices powered by Android.

The first beta version of the Android Software Development Kit (SDK) was released by Google in 2007 where as the first commercial version, Android 1.0, was released in September 2008.



On June 27, 2012, at the Google I/O conference, Google announced the next Android version, 4.1 **Jelly Bean**. Jelly Bean is an incremental update, with the primary aim of improving the user interface, both in terms of functionality and performance.

RESULTS AND DISCUSSION

The majority of applications focus on food donation process, recovering food from donors (food manufacturers, distributors, retailers or individuals) and redistributing to organizations and social services supporting the most deprived. Setting up measurements for both the effectiveness of reducing waste and scaling of user uptake towards food waste should be properly assessed. There is a need for an interactive approach to design processes that avoid relying on a desire to waste less food as a primary motivation, avoid adding the pressure which currently impede food waste reduction, and rather aim to design the food waste management application to have additional motivations, beyond reduction in food waste, so that they are genuinely useful and desirable.

Food waste management applications should consider a goal beyond just food waste reduction to boost user participation. Additionally, application designers have to consider the integration of behavioral change techniques, such as persuasive technology and focus on user interaction design by making the interaction as simple as possible. Social networks could be considered to engage users in the activity. For example, the use of Facebook or Instagram to create an environment where users could contribute to food waste reduction and donation. Future developments should consider the integration of a gamified layer to a core activity to achieve user motivation and long-term engagement with the application.

CONCLUSION

Food wastage has a significant economic, environmental and social impact. The magnitude and complexity of this problem has been tackled by several studies. This survey analyzed the applications area, techniques, phases and their position in the food waste management hierarchy. Based on our findings, there is a great discrepancy between user focus and the focus of food waste management applications. Moreover, there has been little research on user behavior and experience with food waste management applications, especially on user engagement with the application. This observation indicates the need to incorporate techniques that move user focus beyond food waste management and create a sense of belonging and to harmonies the waste management through a set of activities.

FUNCTIONS

Json()

JSON stands for JavaScript Object Notation. It is an independent data exchange format and is the best alternative for XML. This chapter explains how to parse the JSON file

and extract necessary information from it. Android provides four different classes to manipulate JSON data. These classes are **JSONArray**, **JSONObject**, **JSONStringer** and **JSONTokenizer**.

OnClickListener()

A **LISTENER** (OR **OBSERVER**) IS AN ABSTRACT CLASS OR INTERFACE THAT IS USED TO PROVIDE FUNCTIONALITY FOR AN INTERACTABLE UI COMPONENT (E.G., A BUTTON). IT IS A PART OF THE **OBSERVER DESIGN PATTERN** THAT DETECTS ANY EVENTS RELATED TO THE UI; FOR EXAMPLE, CLICKING OR TAPPING A PART OF THE SCREEN EXECUTES A CERTAIN ACTION. EVERY LISTENER HAS A FUNCTION (*CALLBACK METHOD*) THAT IS OVERRIDDEN WHEN IMPLEMENTING A CONCRETE LISTENER.

REFERENCES

- [1] Bartone, C. 2000. Strategies for Improving Municipal Solid Waste Management: Lessons from a Decade of World Bank Lending. Bangkok, Thailand: International Workshop on Creating Sustainable Cities through Urban Environmental Management, Asian Institute of Technology, 6-8 March 2000.
- [2] J.A. Rudmi Chehanika Sandaruwani and W.K. Athula C. Gnanapala / Procedia Food Science 6 (2016) 133 – 135. World Travel and Tourism Council “Economic Impact Report” 2017.
- [3] Ferris, D.A. (1995). A comparison of methodologies used for waste characterization in foodservice operations, Dissertation. Kansas State University, Manhattan, KS.
- [4] H S 2012, Hotel Room Supply, Capital Investment and Manpower Requirement by 2021.
- [5] Kirk, D. 1995. Environmental management in Hotels. International Journal of Contemporary Hospitality Management, old. 7(6), pp.3–8