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Vegetable Waste Management using Android App

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Abstract: Wasting food is common problem in our society. Vegetables market food are wasted. We have identified the use of mobile technology which will supply food waste from vegetables market to biogas plant.
Keywords: Food raw Wastage, Mobile, Biogas plant.

I. INTRODUCTION

Mobile phone applications have seen wide use in recent years . It's known that Android is the most popular platform for mobile, right now android is used on over 190 countries in the world on millions of mobile devices. Android is the most installed platform for mobile, and the number is increasing rapidly since almost 1 million users every day purchase new Android devices and use it immediately to get digital content such as games, application, and many other services . Due to that, we developed an android application *"vegetable app" using* android studio because it will reach a wider range of audience since most people nowadays use android phones. Many Vegetable market tend to throw the leftover food raw materials and Garbage Food at the end of the day which means that huge amounts of food raw materials are wasted. Therefore, we decided to create our application to link the Vegetable market with the Biogas Plant, so instead of throwing the food raw material, the Biogas plant will be able to pick it up from the vegetables market at the end of the day. The application allows the vegetable app to log in, and upload an image of the food raw materials they have as leftovers along with a description of that raw materials, and the location where to pick it up. The Biogas workers then, can log in and can pick the food raw wastage or Garbage food once they send a request to the application. Biogas is the mixture of gases produced by the breakdown of organic matter in the absence of oxygen (anaerobically), primarily consisting of methane and carbon dioxide. Biogas can be produced from raw materials such as agricultural waste, manure, municipal waste, plant material, sewage, green waste or food waste. Biogas is a renewable energy source.

II. LITERATUREREVIEW

According, food waste is a significant issue around the world. It is predicted through a survey that more than 58 percent of food that people produce for consumption is wasted every day. Whereas, more than 60 percent of people in the third world countries are dying in malnutrition without proper food for a living. Therefore, the technologically developed countries that can be Supply food waste to the Biogas plant we can produced electricity. In the age of modern era, where we are developed through artificial intelligence, people are more dependent on the smartphone. There are various applications, which are developed to control the huge wastage of food, and it provides the opportunity to send that extra food to the people who need it. There are multiple applications, which control food waste.

A. Food Wastage and Biogas Plant in Singapore 2020

Food waste is a major waste stream with high generation tonnage and low recycling rate in 2018 singapore generated 763,100tones of food waste of which only 17% recycled. Food waste makes up about half of the average 1.5kg of waste disposed of by each household in Singapore daily. Of which, more than half of household food waste can be prevented, with rice, noodles and bread being the most commonly wasted food items. Singapore's four water reclamation plants, including the UluPandan facility supply 25% of the plant's electricity needs through biogas from sludge. By the new method, the plants can supply 40% of its electricity needs due to higher calorific valued in food waste.

B. Food Wastage and Biogas plant in Africa (Cheetah)

Some researchers from the University of Twenty have developed this application to reduce the number of food wastages in Africa. It is seen that various fruits and vegetables lose their ability to be consumed due to poor road circumstances, less refrigeration in Africa. This application is created to gather those food items before they get rotten and distribute it to the needy malnutrition people of Africa. Gorge Farm is the location of one of the largest biogas plants in East Africa. The farm, which covers more than 800 hectares, feeds the plant with agricultural waste, straw and organic matter. The plant's power output is 2.4 MW, with the electricity produced being fed into the grid or reused on the farm itself.

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C. Indian Food Wastage Reduction Application (No Food Waste)

No Food waste is an application from India that allows the vegetable raw and garbage food and parties to collect leftover foods.

III. PROPOSEDSOLUTION

The proposed solution "Vegetable app" comprises of two logins; user login and restaurant login.

The vegetable market users and biogas plant can register, login, logout, view food wastage with image, title, and description, add raw food to the cart, and empty the cart. Both vegetable market users and biogas plant users must register using the login page.

During registration, some information about the users is saved to the real-time database such as age, name and gender under the unique user id generated by the firebase. So, each user profile information is saved into the database and when a user login we can get access to that user profile using its unique user id.

IV. METHODOLOGY

So here Biogas Plant workers user can login to app and register after that user will be able to see the food raw and garbage food picture uploaded by the vegetable market and biogas plant can order that garbage food and do the payment .Also, a user can select an image from the gallery of a phone.

By selecting gallery option, a user will grant the app access to their phone gallery from where a user can select any image to be uploaded to the list of items.

The user can register, login, logout, view food with image, title, and description, add food to the cart, and empty the cart.

After ordering the food waste from Vegetable market. It will be delivery to location of biogas Plants

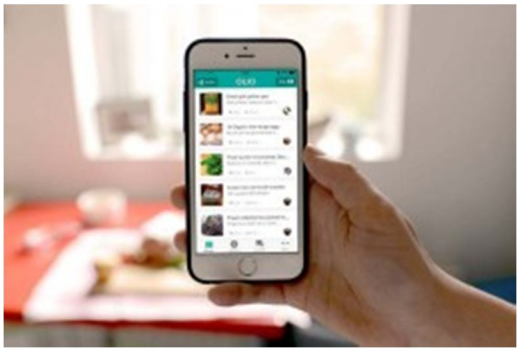


Fig: Food wastage app olio

V. CONCLUSION

Our study has investigated the problem of food waste that has many serious side effects economically and socially. However, the wastage of the food can be prevented or at least decreased using political rules and technology. Mobile application technology is beneficial for food waste management. The app aims to encourage better food management. Our proposed solution should reduce food wastage by facilitating food wastage sharing Biogas Plant for electricity generation using mobile technology. This work is an initial step towards designing a better system to reduce daily garbage food. In future, this app could be enhanced more by adding the more features.

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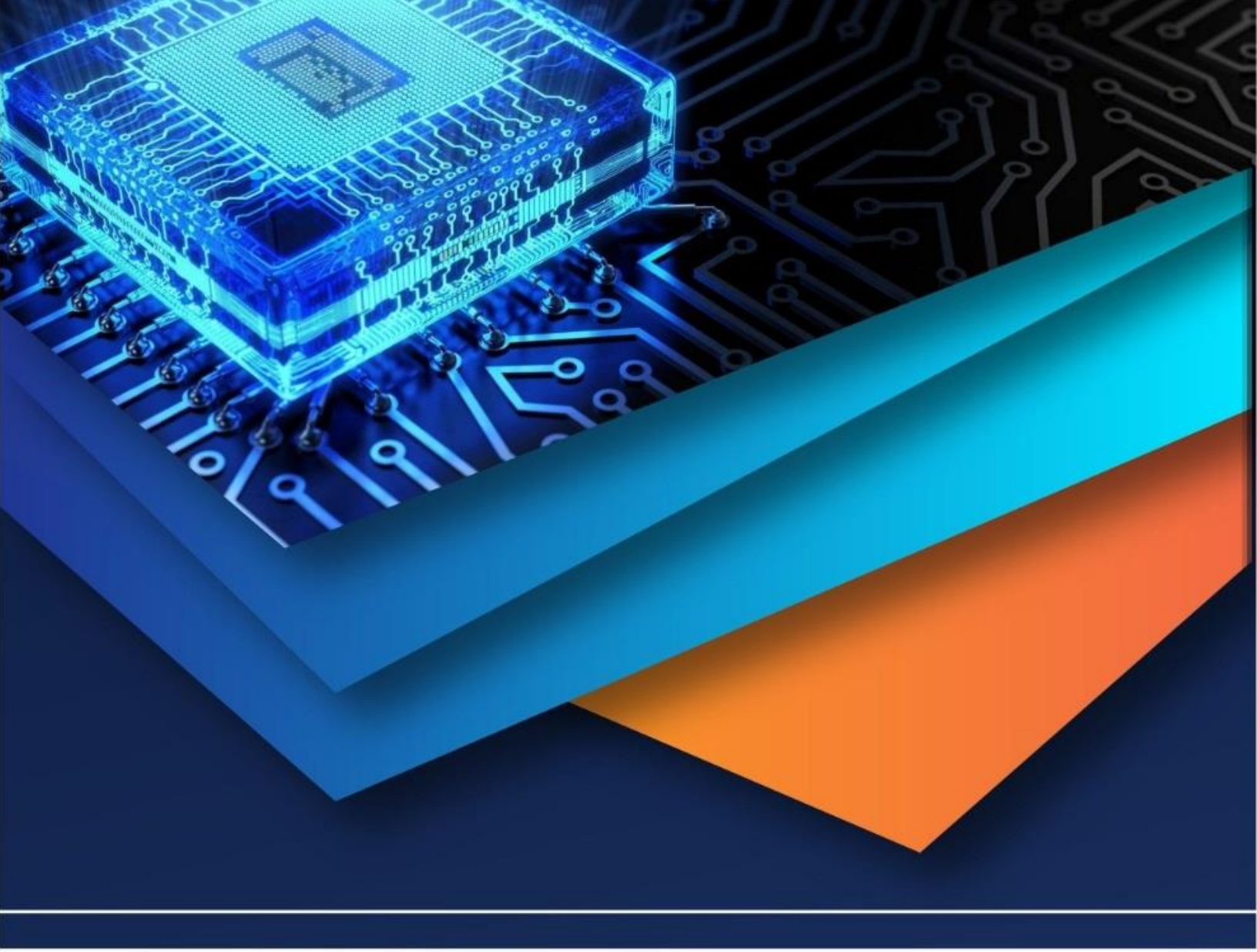
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