KSCST

ಕರ್ನಾಟಕ ಸರ್ಕಾರ

Department of Science and Technology
Government of India

KARNATAKA STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

Indian Institute of Science campus, Bengaluru

Telephone: 080 -23600978, 23341652 || Email: spp@kscst.org.in

Website: www.kscst.iisc.ernet.in/spp.html or www.kscst.org.in/spp.html

FORMAT FOR STUDENT PROJECT PROPOSAL FOR THE 46th SERIES OF STUDENT PROJECT PROGRAMME

PROJECT REFERENCE NUMBER: **46S_BE_2012**

TITLE OF THE PROJECT: **FOODX,THE SYSTEM TO REDUCE THE FOOD WASTAGE USING MACHINE LEARNING**

DEPARTMENT & COLLEGE NAME: **COMPUTER SCIENCE AND ENGINEERING, VIVEKANANDA COLLEGE OF ENGINEERING & TECHNOLOGY, PUTTUR.**

PROJECT GROUP:

Sl. No.	USN	NAME	Email-Id	Phone No.	Team Leader (Yes/No)
1	4VP19CS079	Santhrupthi S	ssanthrupthi4@gmail.com	7349758109	Yes
2	4VP19CS090	Shreeprabha N	shreeprabhabhat@gmail.com	9632669141	No
3	4VP19CS091	Shreya D S	shreya3072001@gmail.com	9980791214	No
4	4VP19CS110	Vidyarathna B	vidyarb30@gmail.com	8281103229	No

GUIDE DETAILS:

Name	Mr. Prof Pramod Kumar P M
Phone Number	9964584947
Mail id	Pramodkumar24a@gmail.com

KEYWORDS: FoodX, machine learning, food wastage;

INTRODUCTION

Food is any substance consumed to provide nutritional support and energy to an organism. It can be raw, processed or formulated and is consumed orally by animals for growth, health or pleasure. Food is mainly composed of water lipids, proteins and carbohydrates. Nutrition is an essential aspect of a healthy lifestyle and the importance of getting it right cannot be overstated. Food is one such source that provides overall nutrition that is required for the body of an organism. FoodX is one such system that gathers several individual donors who are interested in donating the food and serve this food to the people who are in need. This system efficiently manages the waste food distribution. It predicts the duration of food spoiling based on the food prepared time and current environmental factors it also creates awareness about waste food management and its proper utilization.

PROBLEM STATEMENT AND OBJECTIVE

Mangalore regions has a significant distribution of food for the needy manually. Hence its difficult to determine the food spoiled or fresh. If food get spoiled it affects the needy people.

This project aims to determine whether food is fresh or spoiled. Initially, donor uploads the food description with available quantity in donor module. End user can test the food based on the type of food, ingredients, location and prepared time. After that end user can order the food by uploading the required locations and it if the location is suitable for volunteer, volunteer can confirm delivery.

The objectives are as follows,

- **It supports to the Mangalore areas.**
- **Reduce the wastage of excess food.**
- **Easily connects the donors to the needy.**

METHODOLOGY

There are three type of users Donor, End user and Volunteer. Initally, Donor register and he logins to donor module. Donor uplods the food descriptions such as ingredients used prepared time and location later he can viwe the uploaded food description. End user login to the Enduser module and he can test

the avialable quantity of food by entering the destination location. Here we use ID3 algorithm to test the food it takes food type,ingredients, location and preparerd time. Based on these factor it will build decision tree and we get result either food is fresh or food is spoiled. Later he can order the food. Here volunteer belongs to location near by gets the message and volunteer can confirm the deliver.

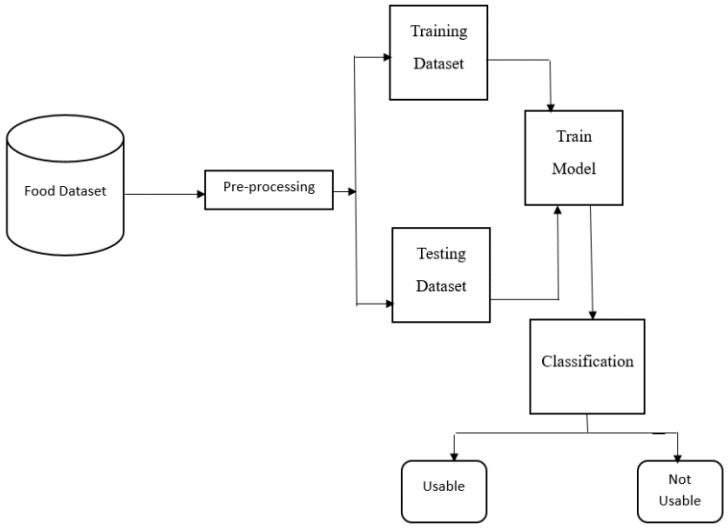

Figure 1: System Architecture of FoodX

RESULT

In FoodX, as soon as the donor uploads the food, end user can view the food and he can click on test food button then the results are obtained as whether the food is spoiled or fresh. If the food is fresh, he can order the available food. Here the food descriptions get trained and tested in the and it will classify food is fresh and spoiled.

CONCLUSION

FoodX is a web application that aims to reduce excess food wastage by connecting donors and volunteers with those in need. By providing a platform for individuals, businesses, and organizations to donate their surplus food, FoodX addresses both food waste and food insecurity simultaneously. FoodX offers several benefits, such as reducing food waste, promoting sustainability, and providing access to healthy meals for those who may not have the means to acquire them otherwise. The application also offers an opportunity for people to make a positive impact on their community and the environment by donating or volunteering their time to help. FoodX is a web application with tremendous potential to create a more

sustainable and equitable food system for all. With continued efforts to improve and expand its services, FoodX can play a significant role in reducing excess food waste and promoting a more sustainable future.

SCOPE FOR FUTURE WORK

FoodX is promising system. As the system gains more traction, it can expand its reach to more communities, businesses, and organizations, increasing its impact and reducing food waste on a larger scale. The future scope for food wastage reduction web application is immense. With increasing awareness about the negative impact of food waste on the environment and society, there is a growing demand for solutions to reduce food waste. The web application can be improved by incorporating more advanced features such as predictive analytics, artificial intelligence, and machine learning. These technologies can help to optimize food distribution, reduce waste in supply chains, and provide real-time information about food waste reduction. Moreover, the application can also collaborate with food banks, food recovery organizations, and local businesses to increase its reach and impact. By working together, these organizations can create a more sustainable and efficient food system, reduce food waste, and provide nutritious meals to those in need. By continuously improving and expanding its features and partnerships, the application can contribute to creating a more sustainable food system.

REFERENCE

[1] K. Jayalakshmi, S. Pavithra, C. Aarthi, Waste to Wealth- A Novel Approach for Food Waste Management 2017 *IEEE International Conference on Electrical, Instrumentation and Communication Engineering (ICEICE).*

[2] Hsiu-Hua Chang Department of Business Administration, Feng Chia University, Seatwen, Taichung, Taiwan, Sustainable Development: Drivers of Consumer Food Wasting in 2019 *2nd Asia Conference on Energy and Environment Engineering (ACEEE).*

[3] Homayoon Fakhim Ahmadi; Arash Rezaee; Qolamreza Miraki,Gardening Waste Management - Case Study in 2010 *International Conference on Chemistry and Chemical Engineering.*

[4] Varsha Jain School of Computing and Electrical Engineering, Indian Institute of Technology, Mandi Mandi, India published in: 2016 *International Conference on Internet of Things and Applications (IOTA).*

[5] Shivani Dalmia2018 Second International Conference on Green Computing and Internet of Things, Visual screens in Canteens providing Real Time information of Food Wastage published in 2018 *Second International Conference on Green Computing and Internet of Things (ICGCIoT).*