

# Direct Delivery of Nearby Expiry Product to Underprivileged Peoples (NGO) using Machine Learning Techniques

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**Abstract:** *E-Agriculture is a platform that enables farmers to promote their agricultural products and provides accurate pricing information to both farmers and consumers. This platform aims to improve the daily lives of farmers and support disadvantaged individuals by redistributing excess food to those in need, thereby reducing food waste. The system is supported by various government and non-governmental organizations, which collaborate with farmers to identify surplus produce and redistribute it to those who require it. The goal of this system is to create a community where middlemen are eliminated, and the actual value of agricultural products is transparently communicated to farmers. By building trust and confidence among consumers and producers, this platform can enhance the credibility of agricultural products. Any leftover food is donated to charities and NGOs, and food waste is disposed of responsibly.*

**Keywords:** Agricultural product, food delivery, consumer, NGO, web application

## I. INTRODUCTION

India is mainly a provincial nation where most people participated in economic development. The hopeless truth is that Indian farmers are largely ignored, whether we call it a country of farmers, regardless of the fact that we need food on a daily basis, and that all of that food comes from property and farmers' labor due to the fact that there is nothing important for their improvement in the present day. To combat this, mechanical importance has been an unprecedented help.

The main goal of this approach is to meet farmers' needs and provide them financial independence. E-cultivation is a stage that aids farmers in moving their products further. This will help both end users who need a clear price for each item as well as all farmers who need a motivating factor for their rural goods. Additionally, purchasing food from this stage through an organization-based NGO will aid impoverished individuals who cannot afford to feed themselves for longer than two days, and buyers who wish to share their excess food in order to prevent waste may do so through this stage.

The purpose of this electronic shop system, as it is shown in this article, is to help farmers sell agricultural items in a straightforward and simple-to-incorporate application for customers who anticipate to get them dependably. Enhancing the farmer-buyer relationship further by providing fresh, direct product movement up to a specific distance and carefully evaluating thing respect.

## II. RELATED WORK

In recent years, various research works have focused on addressing the issue of food waste and improving food distribution processes. One study [1] discussed the use of innovations and employee actions to enhance recoverability of excess food and reduce the burden of collecting donations. However, when dealing with small quantities of food that are nearing their expiration date, it is essential to improve food preservation methods to minimize waste

Another study [2] identified the critical factors for building sustainable supply chains, including the type of supply chain involved and the business mindset of companies towards extending their responsibility for product quality to social and environmental performance within their own supply chains

A proposed framework [3] aimed to evaluate donations for nonprofit hunger relief organizations using a simulation model based on a state-space model for smoothing. The model estimated the average monthly amount of food donations received by a multi-warehouse distribution network.

In [4], a product system was developed to support restaurants and food delivery companies. It allowed customers to place individual or group orders through a web interface, and managers could manage menus, restaurants, customers, and orders. An Android application supported the delivery process.

Another proposed framework [5] aimed to overcome the challenges of food delivery by designing an Automated Food Delivery System. The system used color lines drawn on the restaurant floor to connect all tables to the kitchen, serving as a coordinating track for a robot that was synchronized with the ordering system. When customers placed an order through the ordering system, the system sent the order to the kitchen, and the robot delivered the food to the respective table. After delivering the food, the robot sent a confirmation message to the ordering system.

Finally, [6] proposed a mobile phone-based food waste inventory management system for urban areas. The system allowed for effective communication using mobile and web technologies to manage and respond to food waste inventory and distribute food to those in need. This system could provide quick and efficient ways to distribute excess food to individuals who require it.

### III. SYSTEM ARCHITECTURE

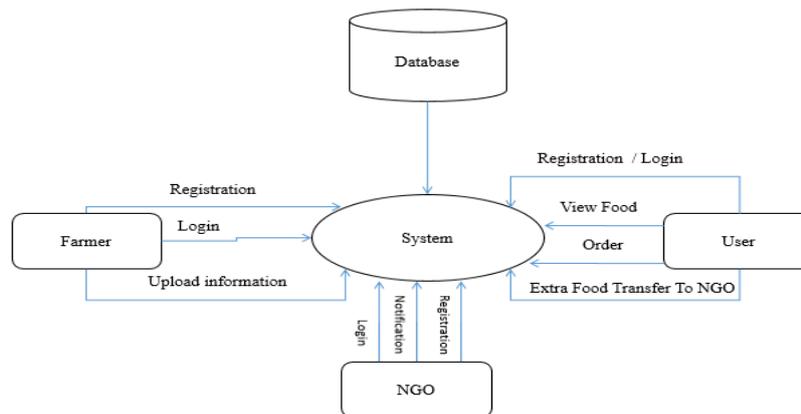


Fig: - System Architecture

### IV. METHODOLOGY

Python and PHP programming languages were used in the development of the suggested system. Moreover, a succinct description of the system's modules is provided. Farmers who are unable to utilize the system have the alternative of the suggested system, which will aid the farmer in the process of selling the products.

The module is been divided into different modules

- Farmer Module
- User Module
- NGO Function

### V. FUTURE SCOPE

- Further we can make the provision of sending the pictures of waste food supply chain situations with geo-tagged images.
- One possible way to enhance the proposed smartphone-based food waste supply chain in urban areas is to allow users to send pictures of waste food supply situations, along with geo-tagged images. This would provide real-time information about the quantity and location of food waste, helping to identify potential sources of donations or recycling opportunities. By leveraging the power of mobile and web technologies, this feature could enable fast and efficient communication between different stakeholders in the food supply chain,

including donors, recipients, and waste management organizations. Moreover, the geo-tagged images could be used to create a visual map of food waste hotspots, which could inform targeted interventions to reduce waste and increase recovery. However, it is important to ensure that the privacy and security of the users are protected, and that the use of geo-tagged images is in compliance with applicable laws and regulations.

- Creation of infrastructure to provide services to the agricultural community
- Infrastructure plays a vital role in agriculture at every single step like for the supply of input, sowing of crops and for the post-harvest management. Planned investment in agriculture infrastructure sector is important to enhance the productivity and to reduce the post-harvest losses this will also result in capacity building and higher income generation. In India post-harvest losses are relatively higher because of gap of basic agriculture infrastructures like storage houses, pack houses, absence of proper supply chain etc.
- Establishing Agriculture Online

### VI. MATHEMATICAL MODEL A

Let S be as system for Direct Delivery of Agriculture Product from Farmer to Consumer and Leftover Food to Underprivileged  $S = \{ In, P, Op, \}$

Identify Input In as  $In = \{ Q \}$

Where, Q = Input Data from User Identify Process P as  $P = CB, C, PR$

Where, CB = Pre-processing C = SVM Classifier PR = Delivery

Identify Output Op as  $Op = \{ UB \}$

Where, UB = Output

Failures: Huge database can lead to more time consumption to get the information. Hardware failure, Software failure.

Success: Search the required information from available in Datasets. User gets result very fast according to their need

### VII. RESULT

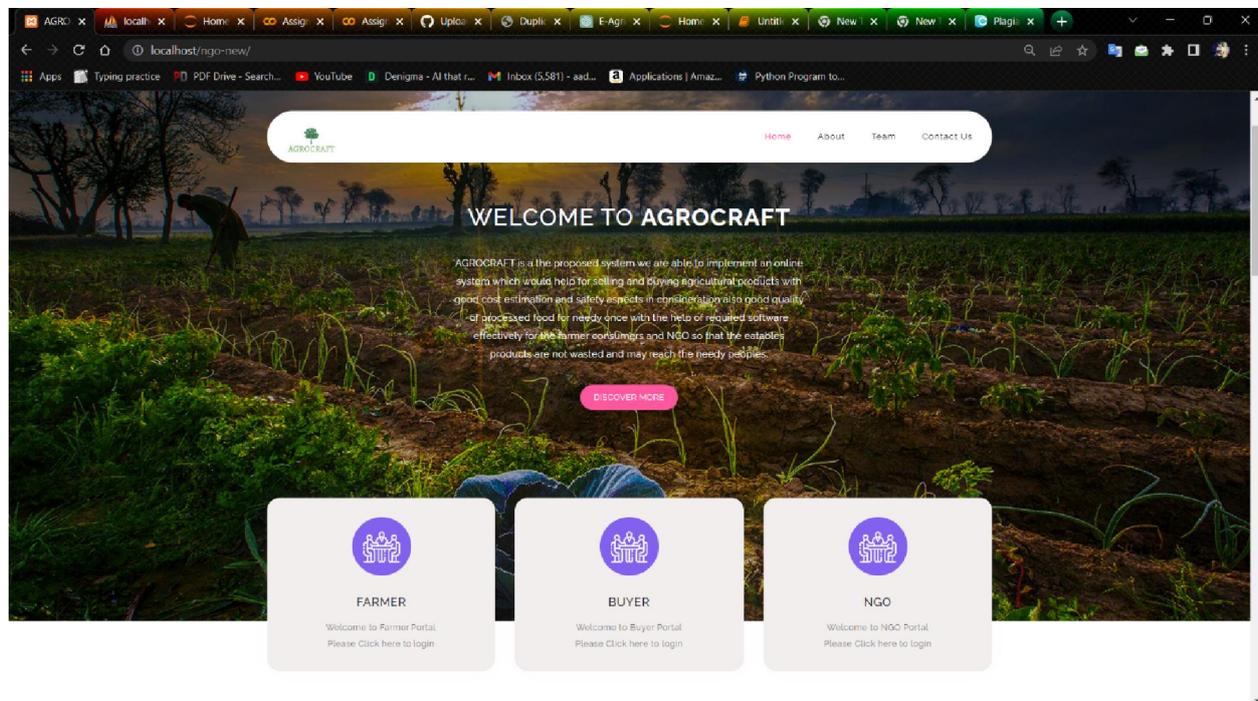
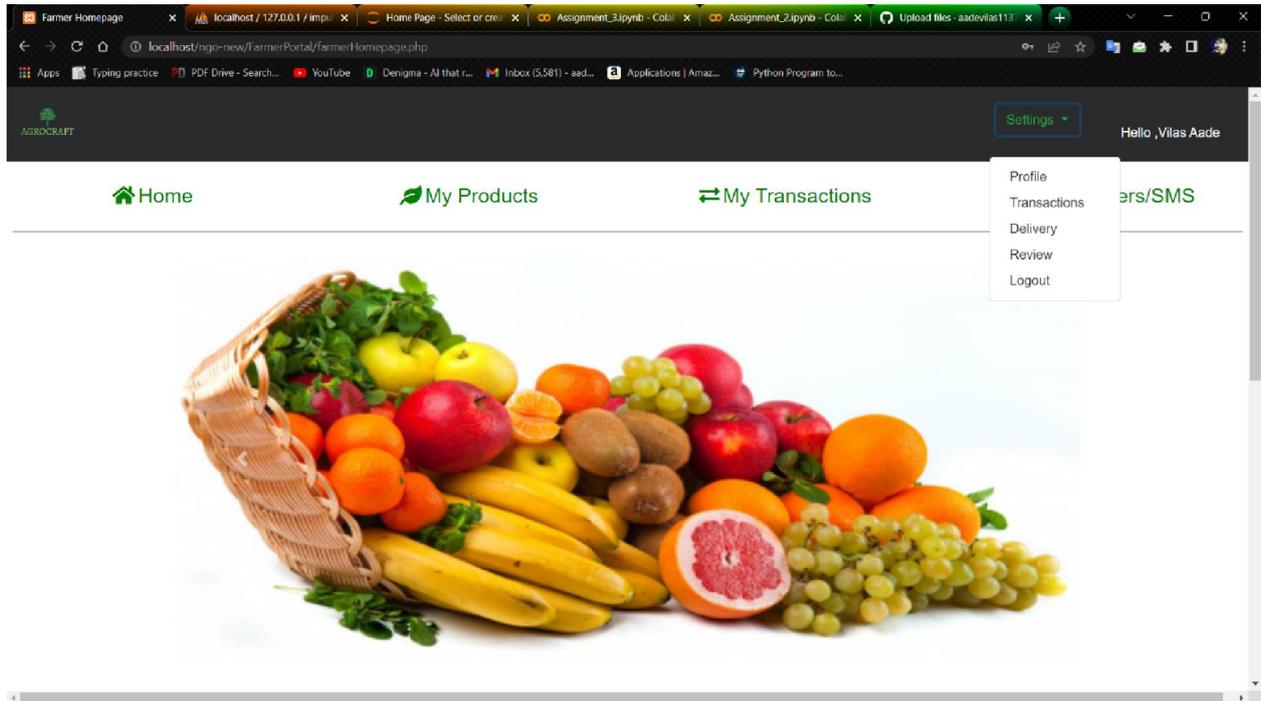
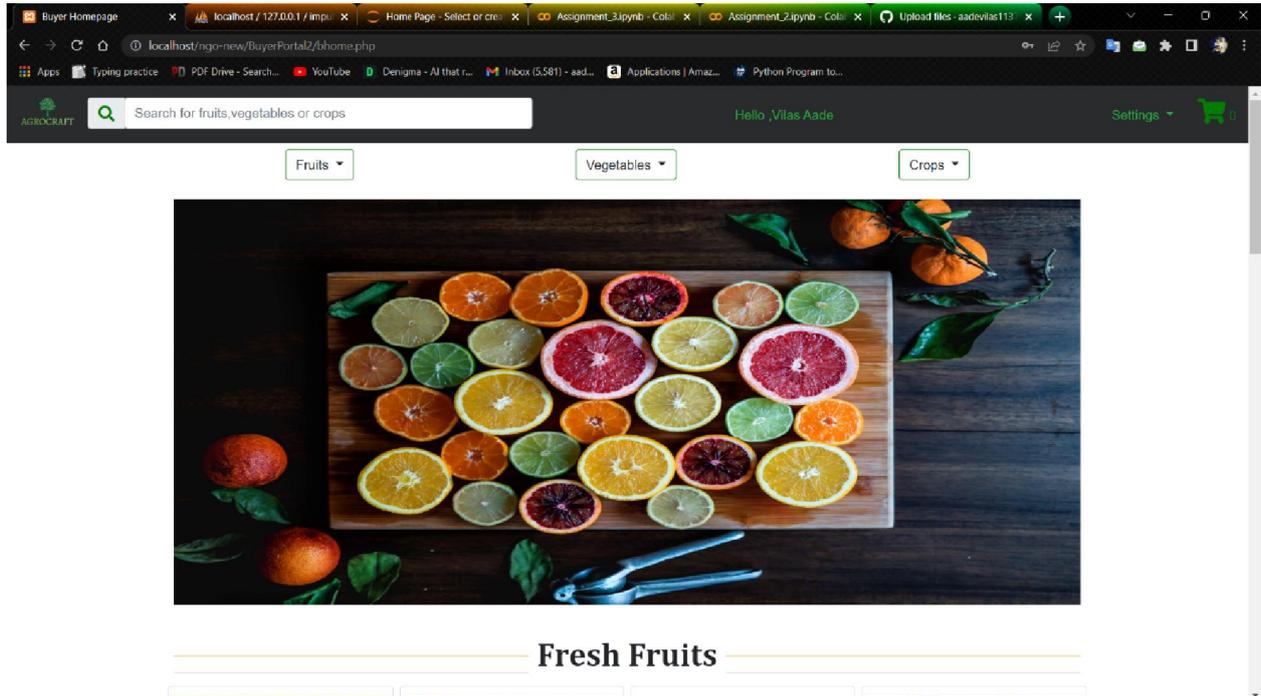


Fig 1:- System Welcome Page



**Fig 2:- Farmer Home Page**



**Fig 3:- Buyer Home Page**

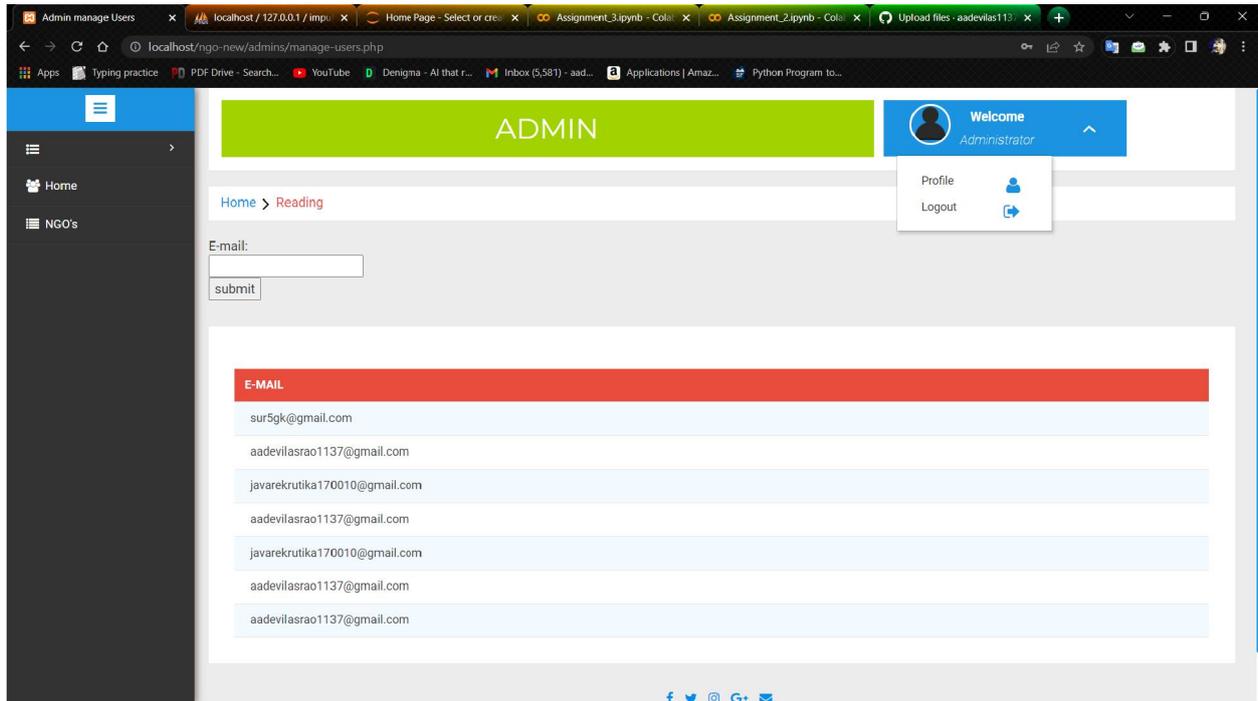


Fig 4:- NGO Home Page

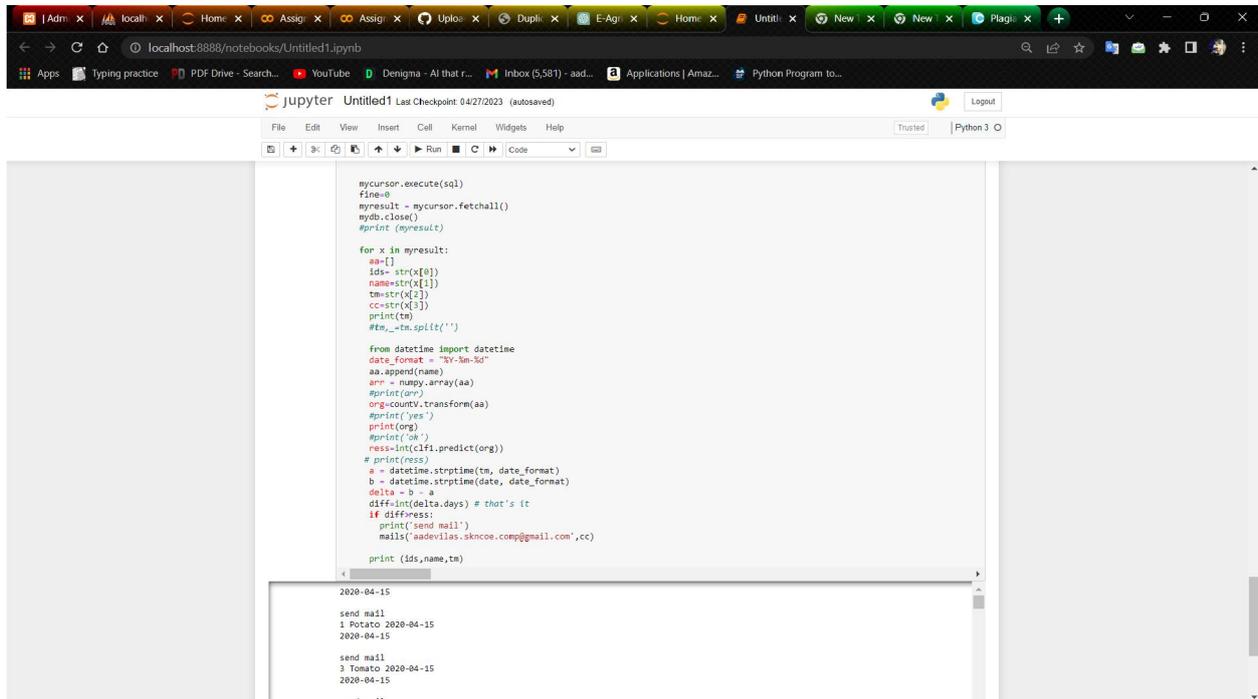
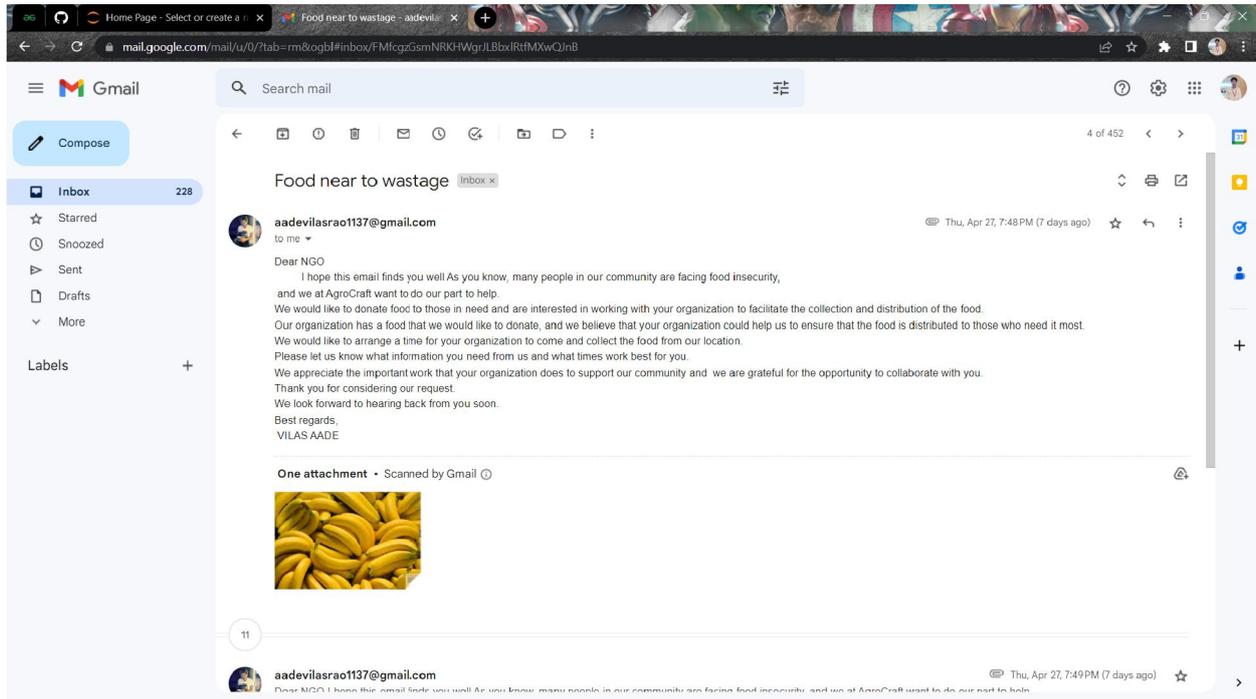


Fig 5:- NGO mail ID



**Fig 6:- Wastage Food Notification Via Mail**

### VIII. CONCLUSION

The proposed system aims to establish an online platform that enables efficient selling and purchasing of agricultural products, with a strong emphasis on cost estimation and safety measures, as well as providing high-quality processed food to those in need. Through the effective utilization of appropriate software, the system will cater to the needs of farmers, consumers, NGOs, and hotels/farmers selling products. The ultimate objective of the system is to prevent food wastage and ensure that surplus food is distributed to those who require it the most.

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