ESTIMATION OF NUTRITION COMPONENTS FROM FOOD

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ABSTRACT:

There has been a rapid increase in dietary ailments during the last few decades, caused by unhealthy food routine. Mobile-based dietary assessment systems that can record real-time images of the meal and analyze it for nutritional content can be very handy and improve the dietary habits and, therefore, result in a healthy life. This paper proposes a novel system to automatically estimate food attributes such as ingredients and nutritional value by classifying the input image of food. Our method employs different deep learning models for accurate food identification. In addition to image analysis, attributes and ingredients are estimated by extracting semantically related words from a huge corpus of text, collected over the Internet. We performed experiments with a dataset comprising 100 classes, averaging 1000 images for each class to acquire top 1 classification rate of up to 85%. An extension of a benchmark dataset Food-101 is also created to include sub-continental foods. Results show that our proposed system is equally efficient on the basic Food-101 dataset and its extension for sub-continental foods. The proposed system is implemented as a mobile app that has its application in the healthcare sector.

Keywords: Data base, food wastage, food deliver.

1. INTRODUCTION:

The entry to a person's heart is through his stomach they say. We would always like to consume good quality food, which will give us great food value, meaning nutrition. The question is how will we get to know this? How will we understand that the food is good, after consumption it will give us good nutrition? A big question in front of all. The proposal idea will actually try to help humans analyze and understand what they eat without much trouble. When we say we should get nutrition what do we

exactly say? Nutrition means which will give us energy when we consume it.

There are 13 types of vitamins our body needs. If there is an imbalance in the consumption, it creates a problem in our body. Body gives signals but if it doesn't it may cause a serious issue. We cannot ignore the fact that less food is available and the population is growing. To meet the demands, we need to save food wastage.

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Future scope will be to develop a complete nutrition tester. We will start with one parameter at a time say for example ph value, that too for a particular food item only for example apple. We can go on adding a lot of parameters gradually and increase or scale it to other food items. The device will be a small hand held one which will give us food analysis and attendant us.

2. EXICITING SYSTEM:

Android application for detection of food and it's nutrition value :

There is a simple solution to the problem of calorie mapping. For the purpose of mapping calories they have used the Clarified API in the Android environment. Procedure for this is simple, users just have to take a photo of the food item or drink they want to eat. Then that food item is detected which is then handled by their Nutritionix API in order to give the nutrition count of the given item. For detecting food items machine learning algorithms are used. Their application is using the Mifflin-St Jeor method to determine the daily calorie consumption. They have also discussed computer image processing algorithms like SURF, SIFT and ORB. So the main motive behind this application is to provide a user friendly, easy to use android application which will help users to keep track of their daily food intake for calorie management.
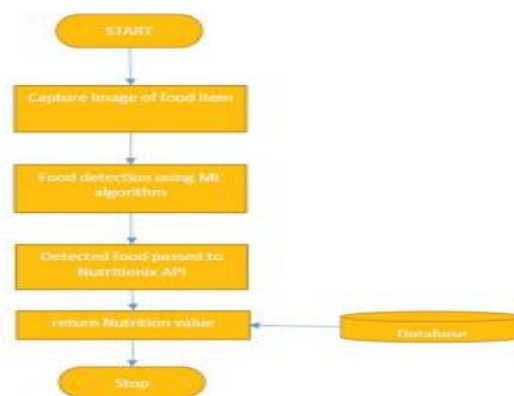
PROPOSED SYSTEM:

The non-destructive electronic nose system is described for identification of food rotting. Designed Electronic nose use an array of sensors for this purpose. Different factors like humidity, temperature, oxygen which affect the process of food rotting are discussed in this paper. The odours coming from spoiled food will have different flavours depending on the food type. Their proposed system works in different stages like odour handling, odour detection and pattern recognition. Different kinds of sensors are used in this system like gas sensors, humidity sensors and temperature sensors. There are five gas sensors, each one of a temperature and humidity sensor is used. As the whole process is automatic this system. Can be used by anyone and it is also cost effective.

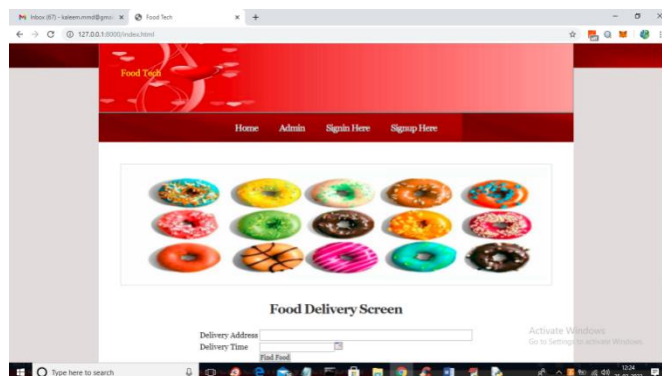### 3. METHODOLOGY

MODULES:

1) Admin:

Admin can login to application by using username and password as admin and then can add new food details and store in Blockchain and can view orders from customers
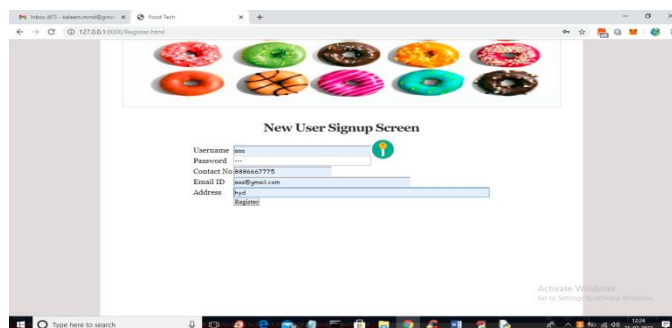
2) User:

User can signup with the application and can browse food and book the food for delivery
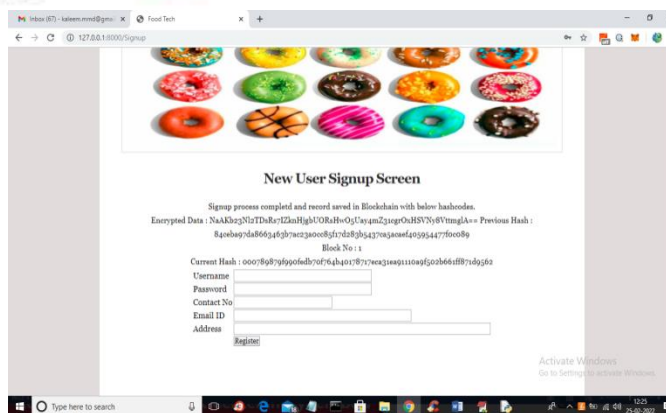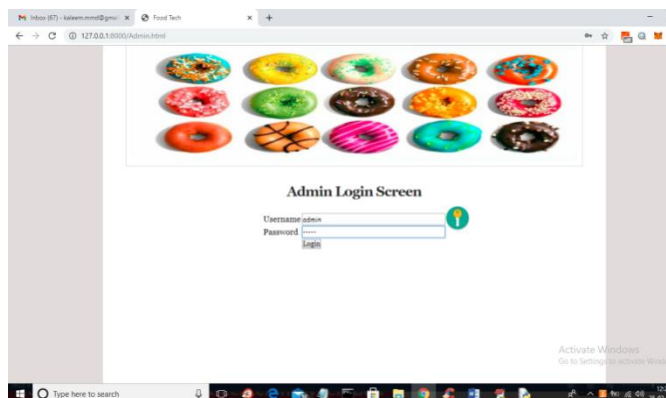
OPERATION:

In above screen click on 'Signup Here' link to register with the application

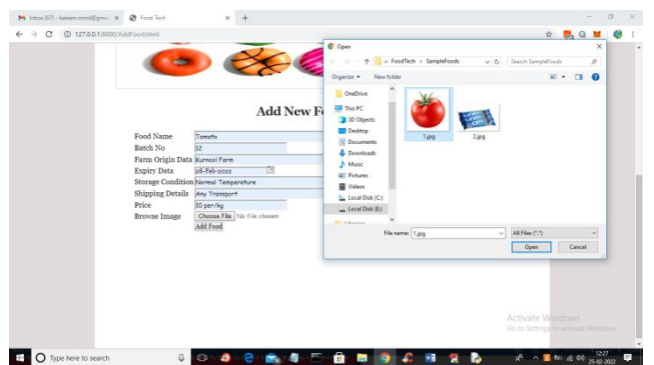In above screen user is entering signup details and then press button to get below output

In above screen we can see signup details completed and we can see Blockchain hashcode and block number where this data is stored. Now in above screen click on 'Admin' link to login as admin
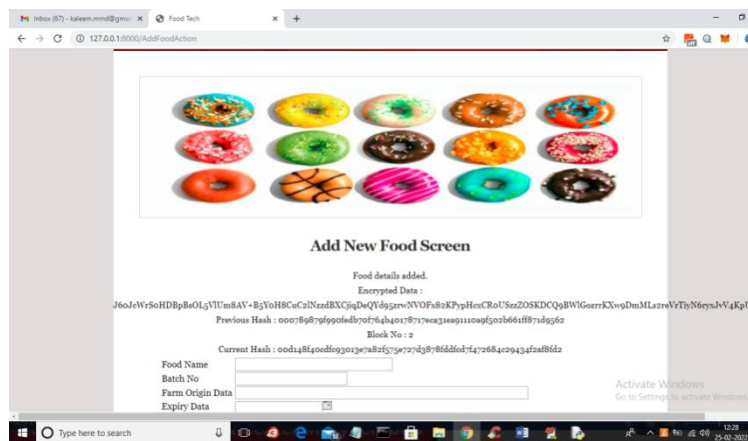

In above screen admin is login and after login will get below screen
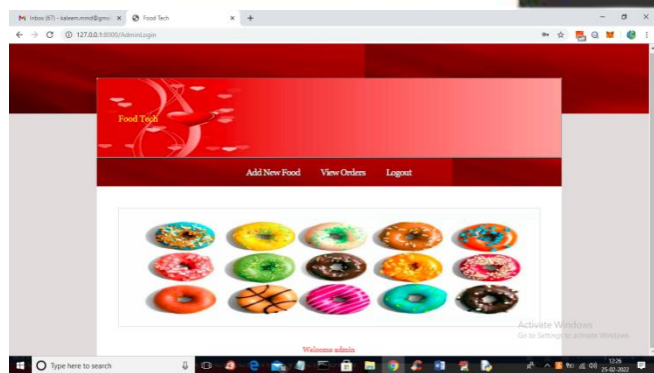
In above screen admin can click on 'Add New Food' link to add new food details

In above scree admin can new food details and upload food image and then click on 'Add Food' button to get below output
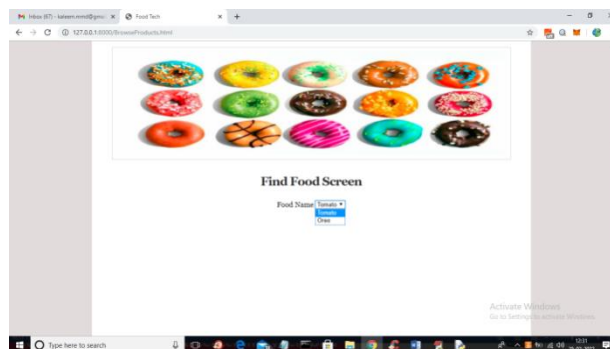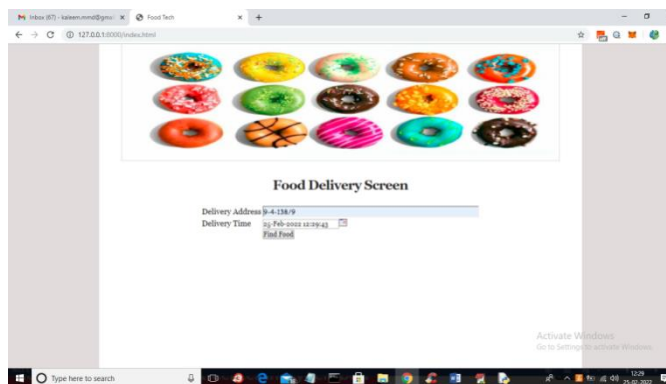

In above screen we can see hash code and block number where this details are stored and similarly
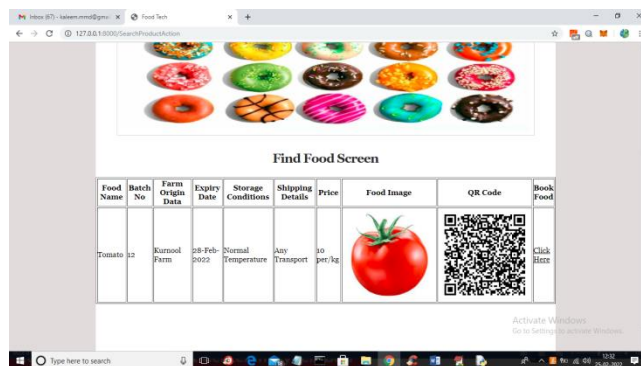
you can add any number of foods and now logout and book food

In above screen user can enter delivery address and time and then click on 'Find Food' button to get below screen

In above screen application asking user to get login first in order to continue and then press 'Login' button to get below screen
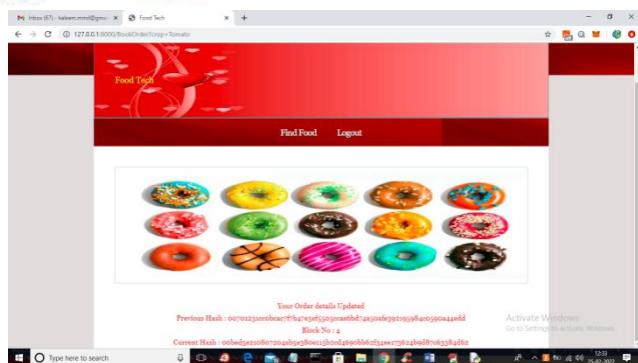

In above screen user can click on 'Find Food' link to get below screen

In above screen user can select desired food and then press search button to get below output

In above screen user can view all details related to food and can view QR code image also and now click on 'Click Here' link to confirm order and get below screen
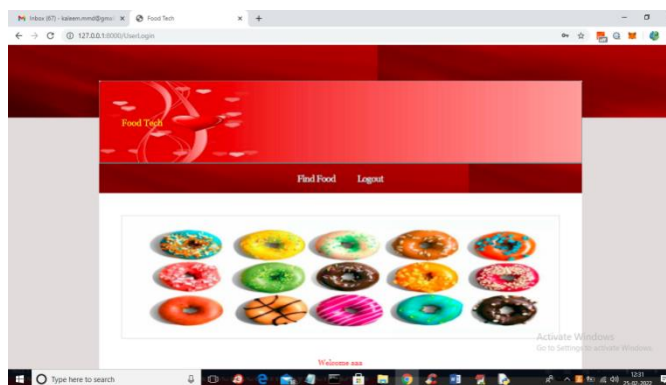
In above screen we can see order is confirmed and we can see hash code and block number where this details are stored in Blockchain and now admin can view this order to complete delivery.

Similarly admin can add any number of new foods and users can browse and book those foods

CONCLUSION

Prosperity and health are one of the growing stresses of human life. There is no question that wealth and sustenance are one of the best parts of life. As such, it is important to make mechanical progress in order to help refurbish and even improve prosperity treatment. In this paper, we presented a look at different systems based on a couple of previous evaluation work carried out by important scientists. We can orchestrate the right food through the techniques for that, as shown by our lifestyle. In addition, it is also important to consider the stability and durability of the sensing bimolecular under field conditions, e.g., is the sensor affected by temperature ranges, the presence of other chemicals and particles? In sensor technology, simpler sample preparation procedures and separation techniques for selective fractionation of bacteria are also a limiting factor.

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