



ANALYSE THE STATUS OF FRUIT VIA FRUITRIX

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ABSTRACT

Nowadays, commerce has been increased in a drastic manner across many countries. Plenty of the fruits are imported from between the nations such as oranges, apples etc. Manual identification of defected fruit is much tedious and a pathetic process in which the people are much confused to the original and infected fruit. This paper presents a segmentation of fruits based on the K means algorithm. We used sample collection of fruits images as a colored one so that the variation can be identified in an easy manner. Set of images is to be compared with the images stored already in the database. Then the variation is to be identified via algorithm such that the status of the particular fruit can be identified easily with the help of the android app.

KEYWORDS: K means algorithm, android.

I.INTRODUCTION

Android is widely used since it's very powerful and has greater accuracy and one can handle it with ease. Android is the world's most widely used smart phone platform and the software of choices for technology companies that require a low cost customizable light weight operating system for high-tech devices without developing one from scratch.

With Android, you can create a unique mobile experience that each and everyone want. Hence many applications based on android can be developed, that can be used on a daily basis to get our work done precisely. But one such use of android technology has not yet effectively explored in the field of agriculture for effective grading, so there was a need to develop an application that could detect the defects in a fruit using an algorithm or a

technique which could be simple to implement and easy to be used by the end user. Android based application of fruit grading is such an application which takes parameters like colour, measurement of fruit, size of the fruit, weight of the fruit, defect percentage of the fruit to give precise grading results. To make the application less complex and handy for use it is implemented in the mobile phones and clustering algorithm is used for grading process. The main constraint for grading of the apple is its surface's red colour and based on the clusters of non-red areas on the apple's surface, weight of the apple the defect percentage is calculated. For this purpose, four different images of the same apple are captured using the mobile phone's rear digital camera with minimum resolution of 2.0 megapixels for crystal clear images. This application works in three phases.

The first phase includes capturing image of the apple from four different angles like top, bottom, left, and right. In this phase user captures the image of the apple with the help of camera and image is viewed on the screen, if the image isn't properly clicked then user can click on retry option and click a new image. The second phase is for adding the weight of apple manually and then four captured images are processed for calculation of defect percentage. The third phase consists of displaying the result grading process. In this phase the result is generated based on the average defect percentage calculated with the help of the captured images of apple and weight of the apple entered manually. Finally the user can see the grading class of apple which is either of three classes i.e. average, moderate, good.

our application uses inbuilt SQLITE database and mobile platform to effectively handle data as well as time.

II-OBJECTIVE

A. To create a separate mobile application

Mobile computing is trending in this digital period of life and mobile platform can be more optimized as well as easy solution for our problem thus we create an android application for this idea

B. To create an adding user image facility

The application will be more user friendly when we provide an option of adding their innovation thus we create an adding our own image to our application

C. To create a view of fruit

The view is more important in our comparison so the user must take their own view and fixed it in its

D. To obtain a validation sign-in

Validation sign-in can be an alternative solution to traditional registration as well as it is of simple security

III-BACKGROUND

The terminologies and technologies used in this project are briefly described as follows

A. Validation Sign-in

Validation Sign-In manages the normal sign in into the app for user in offline service. An user always has the option to revoke access to an application at any time.

B. Image view

The Image View will be helpful to load images from various sources such as gallery or photos from the phone in which the app is installed and then takes care of computing its measurement from the image so that it can be used in any layout manager and provides same display options.

C. Analysis

Analysis fulfil more specific tasks, that's why they have additional requirements on how many percentage variation of status the fruit will appear on the result .

IV. ANALYSIS AND DESIGN

A. Validation Module

Obtain Enter name to known the authority and a password for separate security dependencies in E-Mail id of the user and for additional needed a valid phone number.

B. Browse Module

In this module there are four types. They are

I. TOP VIEW

In this view just upload an image of top view of the fruit and it is submitted for accessing the next screen.

II. BOTTOM VIEW

In this view just upload an image of bottom view of the fruit and it is submitted for accessing the next screen.

III. RIGHT VIEW

In this view just upload an image of right view of the fruit and it is submitted for accessing the next screen.

IV. LEFT VIEW

In this view just upload an image of right view of the fruit and it is submitted for accessing the next screen.

C. Analysis Module

In the analysis module we get an percentage variation and details of the project in good ,average,poor condition .

D. Architecture Diagram

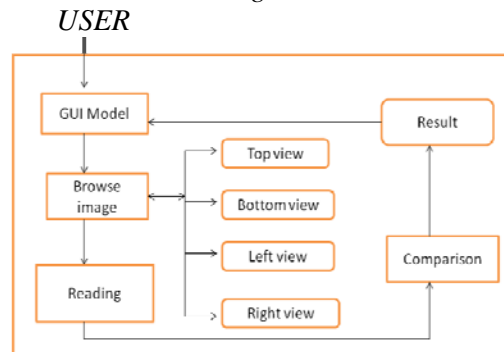


Fig. 1

E. ER Diagram

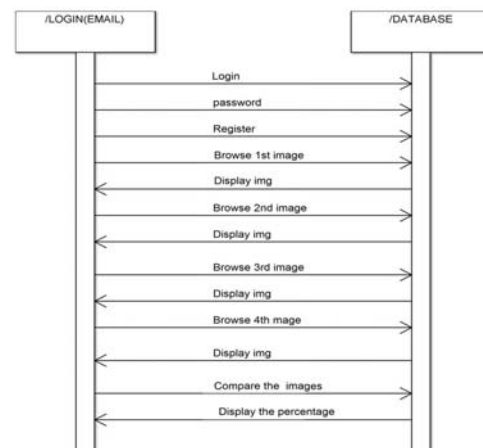


Fig. 2

V-IMPLEMENTATION

The validation API is linked with our Application and the welcome Screen is designed. On clicking on enter name to enter the name. On click on password to enter password. On click on Email to enter email. on click on phone no to enter the phone no. if this form are been filled then are authenticated then it will prompt to next screen of the application

The user's only browse the image separately from gallery or photo. To read the image in top view, bottom view, left view, right view.

This modules only just shown a percentage difference from SQLITE database and given image and from the calculation it shows the result.

Adding Contents module store the Image as a fruit1 in the SQLITE database with the seperate name and if we press the display button same content is retrieved to verify the correctness of the image added. The added contents are displayed to the application if it suits the Interest but not visible to authentic because it is for comparison purpose alone.

VI. IMPLEMENTATION RESULTS

The user can create his/her own image for knowing its status for knowing the percentage variation of a healthy status of the fruit.

SCREENSHOTS

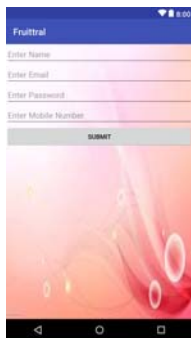


Fig. 3



Fig. 4



Fig.5

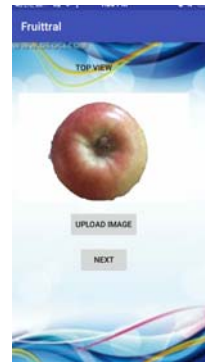


Fig. 6



Fig. 7

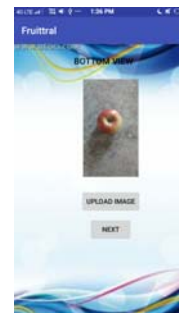


Fig. 8



Fig. 9



Fig. 10



Fig. 11



Fig. 12



Fig. 13

VII. FUTURE WORK

The Dedicated server is obtained and the same concept is applied in a dynamic way and more innovations can be added to experience a real social media.

VIII. CONCLUSION

Thus if the application is implemented it can provide a better detection of status of fruit based k-means and navigation will become easier. The application efficiently manages the data, there is no server side scripting .It also uses shared preference for faster data retrieval. The concept is used to ease the saving of content and manages large file sizes.

IX. REFERENCES

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