IPCV Project

Defect Detection in Fruits and Vegetables
Report

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Introduction:

As we all know that fruits and vegetables become rotten over time and there are various ways with which one can know whether they are edible and good to eat or they rotten and could be harmful to the body.

Our project focuses on trying to find out these defective fruits and vegetables using image processing techniques.

Summary:

To detect the defects in fruits and vegetables we are using k means segmentation and Otsu thresholding in Matlab. Both the external and internal defects are detected.

For external defects, the surface of the fruits in the image is processed.

For internal defects, two approaches are followed. In the first one, the internal images of the fruits are processed for defects, whereas in the second one, the X-ray images of the images are taken and processed for defects.

Here for the x-ray images we are using the Otsu's method for thresholding which separates the pixels into two classes foreground and background.

Here we make sure the variance between the classes is high and the variance in the inter class is low.

Output.