COMPUTER VISION AND IMAGE ANALYSIS BASED TECHNIQUES FOR AUTOMATIC CHARACTERIZATION OF FRUITS – A REVIEW

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ABSTRACT

This paper presents the recent development and application of image analysis and computer vision system in an automatic fruit recognition system. It is very much essential to through light on basic concepts and technologies associated with computer vision system, a tool used in image analysis of fruit characterization. In India the ever-increasing population, losses in handling and processing and the increased expectation of food products of high quality and safety standards, there is a need for the growth of accurate, fast and objective quality determination of fruits. A number of challenges had to be overcome to enable the system to perform automatic recognition of the kind of fruit or fruit variety using the images from the camera. Many kind of fruits are subject to significant variation in color and texture, depending on how ripe they are. There are many processes in agriculture where decisions are made based on the appearance of the product. Applications for grading the fruit by its quality, size or ripeness are based on its appearance, as well as a decision on whether it is healthy or diseased. The objective of this paper is to provide in depth introduction of machine vision system, its components and recent work reported on an automatic fruit characterization system.

KEYWORDS*:* Image Analysis, Fruit Characterization, Computer Vision.