Papaya (Carica papaya) is a tropical fruit having profitable importance because of its high nutritive and medicinal value. India leads the world in papaya production with an annual yield of about 3 million tons [1]. Before collection of these fruits are graded according to their maturity. The major parameter which is differentiating between mature and immature fruit is its color. And also by counting individually mature and immature fruit which implies knowledge about the productivity of the plant. Image analysis is a technique to count the number of fruits on-Tree. In this paper, we present a method for detecting and counting mature and immature fruits from images taken with a tree. We have demonstrated that the proposed method is able to achieve an accuracy of 89.18% and 100% for detecting as well as counting of immature and mature fruit respectively.

Index Terms

Computer Science  Image Processing

Keywords

Fruit counting; Carica Papaya; Randomized Hough Transform; Texture Analysis; K-means Clustering; Erosion & Dilation