The aim of development and advancements in every research and technology is to provide easy solutions to any user's problems including the day to day ones. One problem that a farmer might face is to identify whether his crop is ready for harvesting or not. Hence the efforts are taken to figure out an easy solution for a farmer where he can use his cellular phone to identify whether his crop is ready for harvesting or not. This he can do by taking picture of his crop through the digital camera of his cellular phone. Therefore image processing plays an active role to figure out the solution to this problem. This paper proposes image segmentation of the image of a crop such as tomato to identify whether the crop is ripe enough or not. The feature that is extracted for image segmentation is moment. The classification technique used for segmentation is K-means clustering algorithm. The values for the segmented image viz. Mismatching Rate, Misclassification Rate, PSNR and MSE are then calculated. Then to identify how much the system is robust noise is inserted in the image and then again the image is segmented and the above mentioned values are calculated. Then the image is denoised and again segmentation of the image is performed and the same process is followed. This paper presents the above mentioned process and the system produces equivalent results in all the three cases. The research work presents here the result of the image segmentation done on the image of a tomato using MATLAB version 7.10.
References


Index Terms

Computer Science

Keywords
An Efficient Method of Image Segmentation for Harvest Time Identification

- Image Segmentation
- Moment Based Clustering
- Misclassification Rate
- Mismatching Rate
- PSNR
- MSE