Person across the world are now becoming more conscious about their health and weight. Accuracy of the calorie measuring system is depending on food image analysis. The proper analysis of an image is based on image segmentation technique and is one of the important steps in image analysis. Multiple image segmentation techniques exist for extracting requires objects from an image. Different image segmentation techniques based on edge detection, region growing, based on clustering and thresholding are applied on food images but these techniques are not useful for segmenting the overlapped regions of food. Watershed segmentation technique is used to solve the problem of over segmentation and segmenting small regions which are overlapped to each other but this segmentation results are not more accurate for increasing accuracy of segmentation result. In this paper work hybrid model is proposed by combining Morphological Operations and Watershed Segmentation technique (MOWS) to segment overlapped regions of food with their shape. Watershed Segmentation and MOWS are implemented in MATLAB and Analysis is done based on their PSNR values. Analysis shows that proposed hybrid model MOWS is given more accurate result than
watershed segmentation.

References

3. SUN Hui-jie, Watershed Image Segmentation Algorithm Base on Particle Swarm and Region Growing, 2015 IEEE.
4. Xuemei Cui, Guowei Yang, Yan Deng, Shaolong Wu, An Improved Image Segmentation Algorithm Based on The Watershed Transform , 2014 IEEE.

Index Terms

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Keywords