



iJRASET

International Journal For Research in
Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 5 Issue: VII Month of publication: July 2017

DOI:

www.ijraset.com

Call:  08813907089

E-mail ID: ijraset@gmail.com

Enhancement the Contrast of Intensity and Color Detection of Image for Various Applications

Ravi¹, Renu Malik²

^{1,2} Department of Computer Science and Engineering, OM Institute of Technology and Management

Abstract: Segmentation is considered as one of the main steps in image processing. It divides a digital image into multiple regions in order to analyze them. It is also used to distinguish different objects in the image. In this paper different kinds of images are tested on the bases of the colour segmentation. Different types of images are tested i.e. medicine image, flowers image, and vegetables image. For the best result fuzzy logic is used. Fuzzy logic is used for the edge detection. This gives the better result because error chances are less due to edge detection. This improved segmentation technique used in various fields i.e. separation of medicine, flowers, vegetables and many more. Basically this technique is useful for industrial purpose because of huge data available for shorting. Manually this will take more time so use this technique for faster response and less error because this work automatically.

Keywords: Colour segmentation, FUZZY, PSNR, SNR

I. INTRODUCTION

Segmentation is an important step in computer world and automatic pattern recognition processes based on image analysis of eye as subsequent extracted data are highly dependent on the accuracy of this operation. In general, the automated segmentation is one of the most difficult tasks in the image analysis because a false segmentation will cause degradation of the measurement process and therefore the interpretation may fail. colored image segmentation is still an unsolved problem because of its complex and under constrained attributes. Colour segmentation is very important part of the image processing.

II. COLOR DETECTION

A. *Input image 1:* Input image for colour detection is used as medicine.



Fig 1: input medicine image

The above fig shows the sample input images of colored medicines.

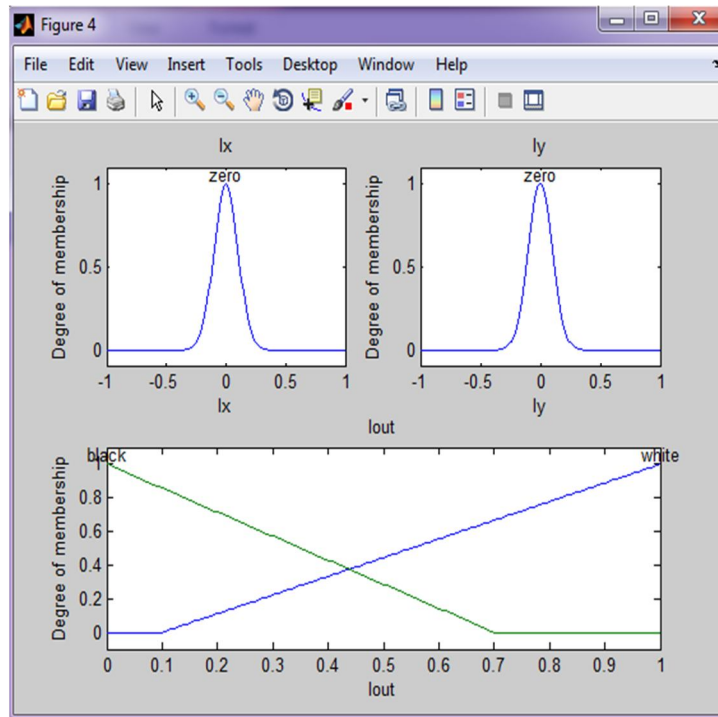


Fig 2: Fuzzy membership function

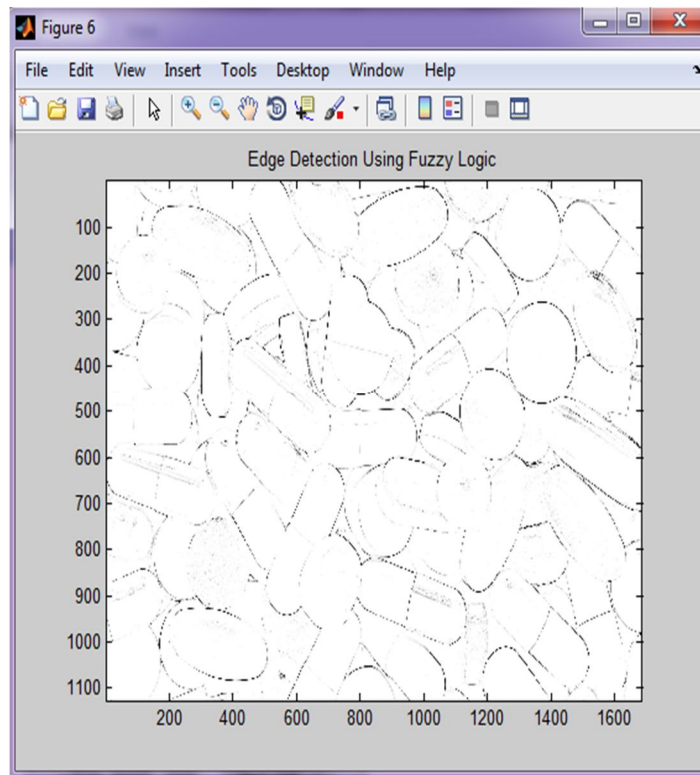


Fig 3: Edge detection using fuzzy logic

In the above fig shows the edges detected by fuzzy logic. Splitting the original image into red band color bands out of red, blue, green bands and masked the image with the detected color



Fig 4: input image after enhance contrast of intensity

The above fig shows the enhanced contrast of intensity of image .for the color segmentation image is splitting the image into three bands i.e. red,green and blue. Then image bands are masked. Then the red color masked as the original image.

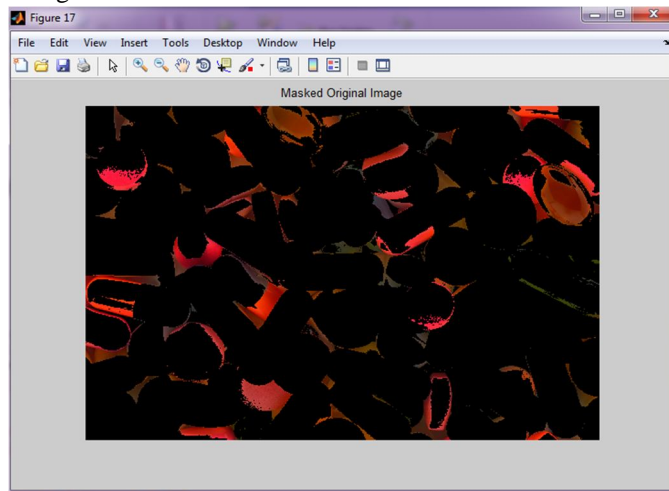


Fig 5: Masked original image after detecting red colour

B. Input image 2: Input image for colour detection is used as flowers.



Fig 6: input flower image

The above fig shows the sample input images of colored flowers.

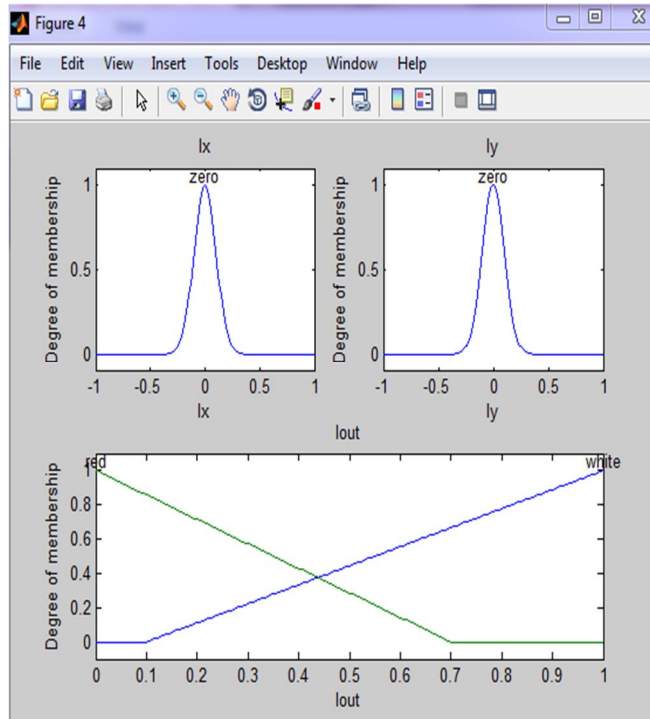


Fig 7: Fuzzy membership function

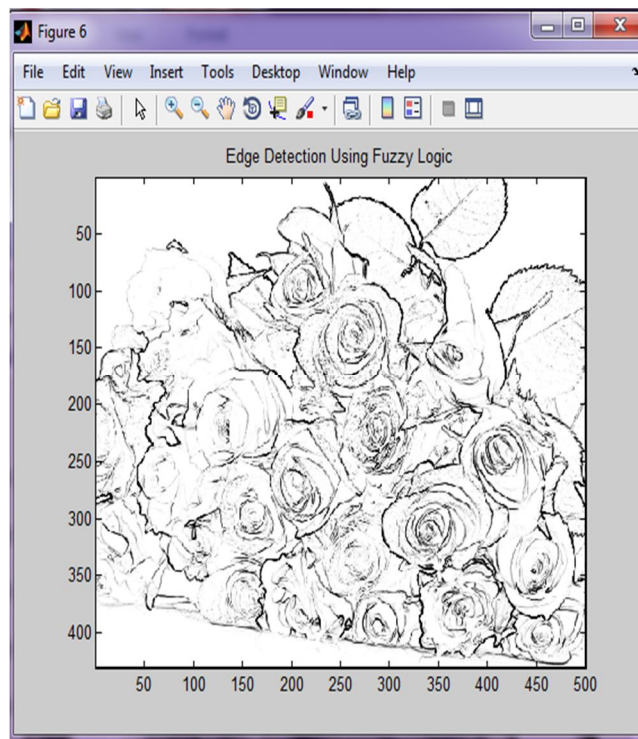


Fig 8: Edge detection using fuzzy logic

In the above fig shows the edges detected by fuzzy logic. Splitting the original image into red band color bands out of red, blue, green bands and masked the image with the detected color.

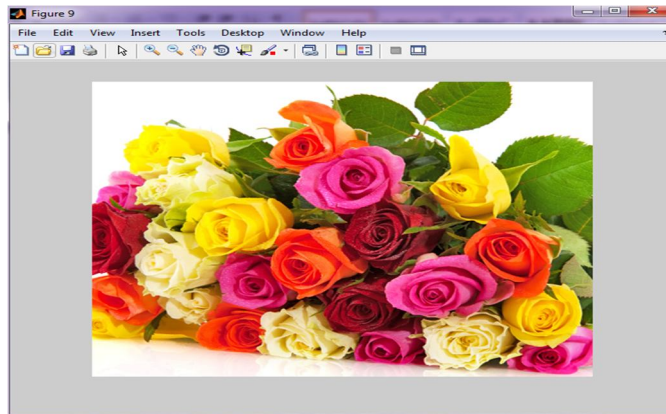


Fig 9: input image after enhance contrast of intensity

The above fig shows the enhanced contrast of intensity of image .for the color segmentation image is splitting the image into three bands i.e. red.green and blue. Then image bands are masked. Then the red color masked as the original image.

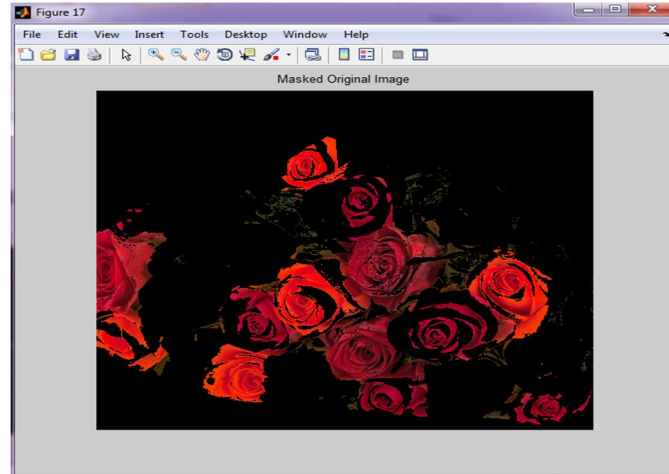


Fig 10: Masked original image after detecting red colour

C. *Input image 1:* Input image for colour detection is used as vegetables.



Fig 11: input vegetables image

The above fig shows the sample input images of colored vegetables.

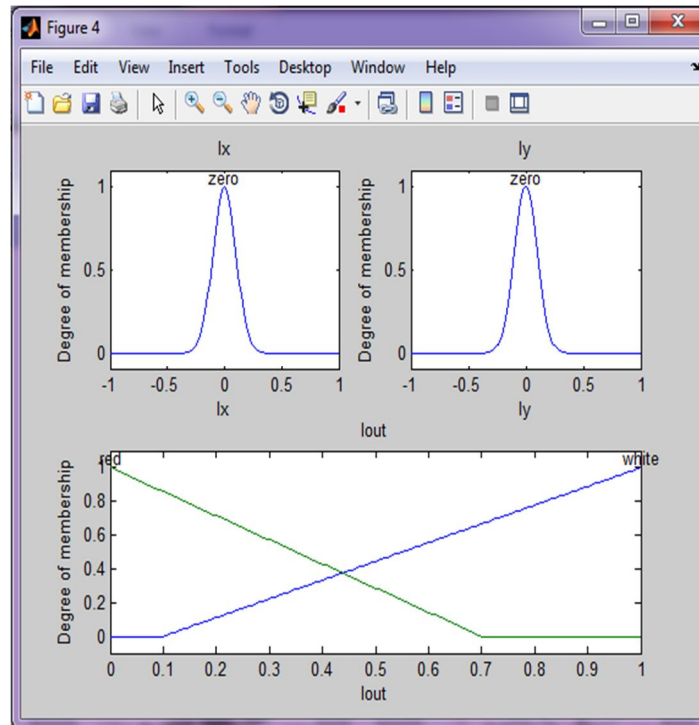


Fig 12: Fuzzy membership function

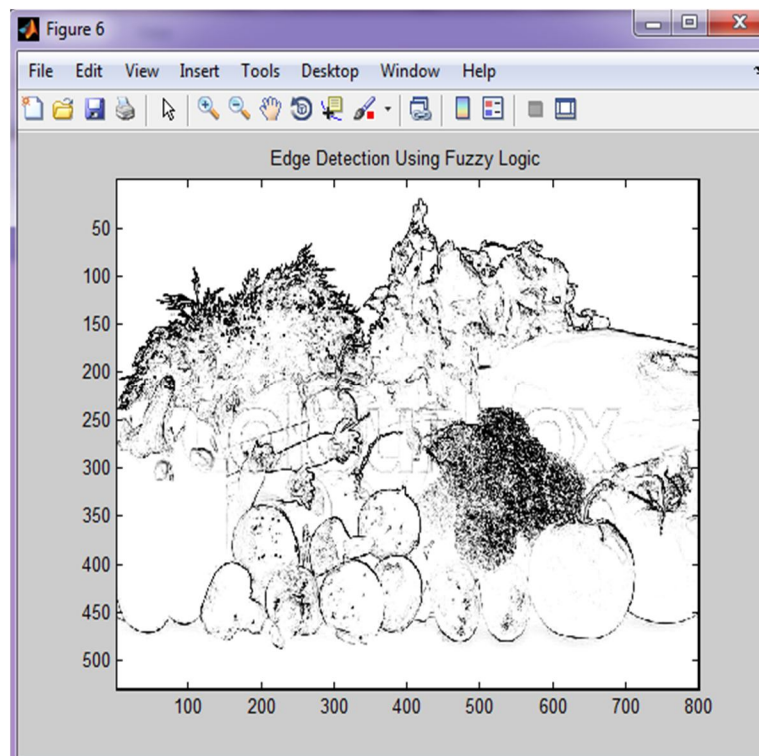


Fig 13: Edge detection using fuzzy logic

In the above fig shows the edges detected by fuzzy logic. Splitting the original image into red band color bands out of red, blue, green bands and masked the image with the detected color.

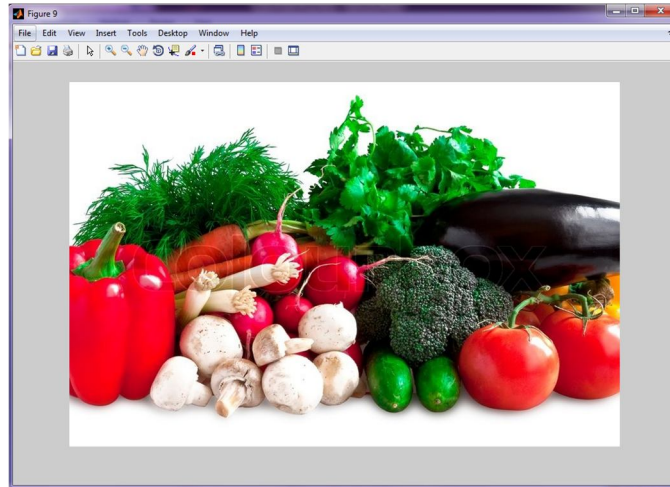


Fig 14: input image after enhance contrast of intensity

The above fig shows the enhanced contrast of intensity of image .for the color segmentation image is splitting the image into three bands i.e. red.green and blue. Then image bands are masked. Then the red color masked as the original image.

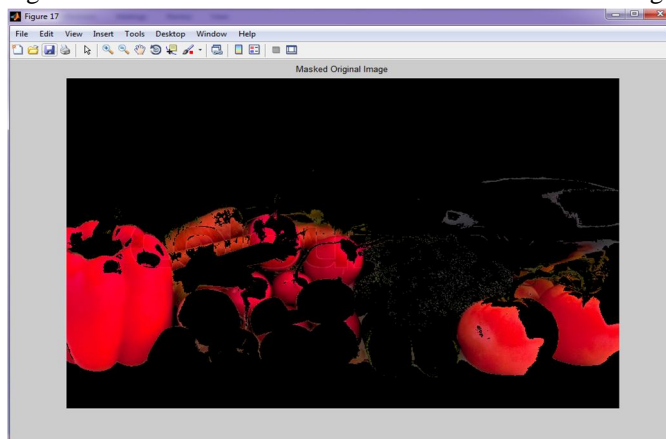


Fig 15: Masked original image after detecting red colour

III. CONCLUSION

In this paper different kinds of images are tested on the bases of the colour segmentation. Different types of images are tested i.e. medicine image, flowers image, and vegetables image. For the best result fuzzy logic is used. Fuzzy logic is used for the edge detection .This gives the better result because error chances are less due to edge detection. This improved segmentation technique used in various fields i.e. separation of medicine, flowers, vegetables and many more. Basically this technique is useful for industrial purpose because of huge data available for shorting. Manually this will take more time so use this technique for faster response and less error because this works automatically.

REFERENCES

- [1] D. JyothiPreshiya, "Diagnosing diabetics with reflex zones of the tongue using colour image segmentation" Journal of Chemical and Pharmaceutical Research, 2015, 7(2):876-881.
- [2] Sun Yongqian and Xi Liang "A New Parallel Segmentation Algorithm for Medical Image" International Journal of Signal Processing, Image Processing and Pattern Recognition Vol. 8, No. 2 (2015), pp. 139-146.
- [3] Dibya Jyoti Bora, Anil Kumar Gupta, Fayaz Ahmad Khan "Comparing the Performance of L*A*B* and HSV Color Spaces with Respect to Color Image Segmentation" International Journal of Emerging Technology and Advanced Engineering (ISSN 2250-2459, ISO 9001:2008 Certified Journal, Volume 5, Issue 2, February 2015).
- [4] Amanpreet kaur and Navjot kaur "Image Segmentation Techniques" International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395 - 0056 Volume: 02 Issue: 02 | May-2015



- [5] Nandhini. P, Dr. J. Jaya, "Image Segmentation for Food Quality Evaluation Using Computer Vision System", Journal of Engineering Research and Applications, Vol. 4, Issue 2(Version 5), February 2014, pp.01-03.
- [6] DibyaJyoti Bora, Anil Kumar Gupta, Ph.D. "A New Approach towards Clustering based Color Image Segmentation". International Journal of Computer Applications, Volume 107 – No 12, December 2014. pp. 23-30.
- [7] Bshara M. and Gustafsson F. "A Survey Paper on Fuzzy Image Segmentation Techniques. Ms. R. SaranyaPonSelvi et al Int. Journal of Engineering Research and Applications www.ijera.com ISSN : 2248-9622, Vol. 4, Issue 3(Version 1), March 2014, pp.429-434
- [8] Prof. S. T. Khandare¹, Mr. Akshay D. Isalkar² "A Survey Paper on Image Segmentation with Thresholding". IJCSMC, Vol. 3, Issue. 1, January 2014, pg.441 – 446
- [9] Hongbing Liu, Lei Li and Chang-a Wu. "Color Image Segmentation Algorithms based on Granular Computing Clustering". International Journal of Signal Processing, Image Processing and Pattern Recognition Vol.7, No.1 (2014), pp.155-168
- [10] Vijay Jumb, MandarSohani, AvinashShrivastava "Color Image Segmentation Using K-Means Clustering and Otsu's Adaptive Thresholding" International Journal of Innovative Technology and Exploring Engineering (IJITEE) ISSN: 2278-3075, Volume-3, Issue-9, February 2014, 72-76.



10.22214/IJRASET



45.98



IMPACT FACTOR:
7.129



IMPACT FACTOR:
7.429



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089  (24*7 Support on Whatsapp)