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Digital Image and Signal Processing
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IJCA Proceedings on National Conference on

NCDISP 2016 - Number 1

Year of Publication: 2016

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{bibtex}ncdisp201620.bib{/bibtex}

Abstract

Diabetic Retinopathy caused by leakage of blood or fluid from the retinal blood vessels and it will damage the retina. Yellow flecks are called hard exudates. Exudates are the lipid residues of serous leakage from damaged capillaries. Design new wavelet filter for extraction of exudates using fundus images. This algorithm is tested on online databases such as, STARE, DRIVE, Diarect DB0, Diarect DB1 and local database SASWADE. The proposed wavelet filter is compared with the existing symlet wavelet. The proposed algorithm got Sensitivity of 97.97

% and Specificity of 100%.

Refer

ences

- Asha G. K. , et al, "Exudates Detection in Retinal Images using Back Propagation Neural Network", International Journal of Computer Applications (0975 – 8887) Volume 25– No. 3, July 2011.
- S. Kavitha & K. Duraiswamy "Automatic Detection of Hard and Soft Exudates in Fundus Images Using Color Histogram Thresholding" European Journal of Scientific Research SSN 1450-216X Vol. 48 No. 3 (2011), pp. 493-504.
- V. Vijayakumari, N. Suriyanarayanan "Exudates Detection Methods in Retinal Images Using Image Processing Techniques "International Journal of Scientific & Engineering Research, Volume 1, Issue 2, November-2010 1 ISSN 2229-5518
- P N Jebarani Sargunar & R Sukanesh, "Exudates Detection And Classification In Diabetic Retinopathy Images By Texture Segmentation Methods" International Journal of Recent Trends in Engineering, Vol 2, No. 4, November 2009,148
- Baochen Jiang, et. al, "Implementation of Biorthogonal Wavelet Transform Using Discrete Cosine Sequency Filter", International Journal of Signal Processing, Image Processing and Pattern Recognition Vol. 6, No. 4, August, 2013.
- <http://www.diabetes.co.uk/global-diabetes/diabetes-in-india.html>
- M. B. Patwari, R. R. Manza, Y. M. Rajput, M. Saswade, N K. Deshpande, "Calculation of Retinal Blood vessels Tortuosity by using Image processing Techniques and Statistical Techniques", International Journal of Trends in Computer Science, ISSN: 7462 – 8452, Volume 2, Issue 11, 2013.
- M. B. Patwari, R. R. Manza, Y. M. Rajput, M. Saswade, N K. Deshpande, "Detection and Counting the Microaneurysms using Image Processing Techniques International Journal of Applied Information Systems (IJ AIS) 6(5):11-17, November 2013. Published by Foundation of Computer Science, New York, USA. , ISSN : 2249-0868, Vol. 6 Number 5, October 2013.
- M. B. Patwari, R. R. Manza, Y. M. Rajput, M. Saswade, N K. Deshpande, "Automatic Detection of Retinal Venous Beading and Tortuosity by using Image Processing Techniques", International Journal in Computer Application(IJCA), February 2014, ISBN : 973-93-80880-06-7, Impact Factor 0. 821
- Yogesh M. Rajput, Ramesh R. Manza, Manjiri B. Patwari, Neha Deshpande, "Retinal Blood Vessels Extraction Using 2D Median Filter", Third National Conference on Advances in Computing(NCAC-2013), 5th to 6th March 2013, School of Computer Sciences, North Maharashtra University, Jalgaon-425001 (MS) India.
- Yogesh M. Rajput, Ramesh R. Manza, Manjiri B. Patwari, Neha Deshpande, "Retinal Optic Disc Detection Using Speed Up Robust Features", National Conference on Computer & Management Science [CMS-13], April 25-26, 2013, Radhai Mahavidyalaya, Auarngabad-431003(MS India).
- M. B. Patwari, R. R. Manza, Y. M. Rajput, M. Saswade, N K. Deshpande, "Review on Detection and Classification of Diabetic Retinopathy Lesions Using Image Processing Techniques", International Journal of Engineering Research & Technology

(IJERT), ISSN: 2278-0181, Vol. 2 Issue 10, October – 2013.

- Manjiri B. Patwari, Ramesh R. Manza, Yogesh M. Rajput, Neha K. Deshpande, Manoj Saswade, "Extraction of the Retinal Blood Vessels and Detection of the Bifurcation Points", International Journal in Computer Application(IJCA), September 18, 2013. ISBN : 973-93-80877-61-7.
- Manjiri B. Patwari, Dr. Ramesh R. Manza, Yogesh M. Rajput, Dr. Manoj Saswade, Dr. Neha K. Deshpande, "Personal Identification algorithm based on Retinal Blood Vessels Bifurcation", 2014 International Conference on Intelligent Computing Applications, 978-1-4799-3966-4/14 © 2014 IEEE, DOI 10.1109/ICICA. 2014. 51
- Manjiri B. Patwari, Ramesh R. Manza, Yogesh M. Rajput, Deepali D. Rathod, Manoj Saswade, Neha Deshpande, "Classification and Calculation of Retinal Blood vessels Parameters", IEEE's International Conferences For Convergence Of Technology, Pune, India.
- Deepali D. Rathod, Ramesh R. Manza, Yogesh M. Rajput, Manjiri B. Patwari, Manoj Saswade, Neha Deshpande", Localization of Optic Disc using HRF database", IEEE's International Conferences For Convergence Of Technology, Pune, India.
- Patwari Manjiri, Manza Ramesh, Rajput Yogesh, Saswade Manoj, Deshpande Neha, "Automated Localization of Optic Disk, Detection of Microaneurysms and Extraction of Blood Vessels to Bypass Angiography", Springer, Advances in Intelligent Systems and Computing. ISBN: 978-3-319-11933-5, DOI: 10.1007/978-3-319-11933-5_65. 2014.
- "Understanding MATLAB" By Karbhari Kale, Ramesh R. Manza, Ganesh R. Manza, Vikas T. Humbe, Pravin L. Yannawar, Shroff Publisher & Distributer Pvt. Ltd. , Navi Mumbai, April 2013. ISBN: 9789350237199.
- "Understanding GUI using MATLAB for Students" By Ramesh Manza, Manjiri Patwari & Yogesh Rajput, Shroff Publisher & Distributer Pvt. Ltd. , Navi Mumbai, April 2013. ISBN: 9789351109259.
- Yogesh M. Rajput, Ramesh R. Manza, Manjiri B. Patwari, "Extraction of Cotton Wool Spot using Multi Resolution Analysis and Classification using K-Means Clustering", IJCA Proceedings on National conference on Digital Image and Signal Processing, International Journal of Computer Applications (0975 – 8887) 2015.

Index Terms

Computer Science

Image Processing

Keywords

Wavelet Filter Retinal Exudates