Abstract

In this paper, it is proposed to detect the exudates in the retinal image and to classify the severity stages caused by the exudates and non-exudates using Adaptive Neuro Fuzzy Inference System (ANFIS). The retinal image used for this project work is subjected to the preprocessing steps such as green channel extraction, median filter, histogram equalization and contrast enhancement. Then the image is subjected to morphological operation for dilation and erosion. Optic disk is eliminated by connected component technique and statistical features like exudates area, size, color, energy, skewness, kurtosis, entropy, homogeneity and texture properties are extracted. The features are now classified to identify the normal eye and affected eye. The classification is accomplished using ANFIS.
Adaptive Neuro Fuzzy Inference System Assisted Diagnosis of Diabetic Retinopathy from Fundus Image

References

- M. Ponni Bala, S. Vijayachitra, "Computerised Retinal Image Analysis to Detect and Quantify Exudates Associated with Diabetic Retinopathy," Volume 54– No. 2, September 2012.

**Index Terms**

Computer Science  
Image Processing

**Keywords**

Retina  
Exudates  
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Classification