Abstract

Glaucoma affects most of the eyes of the people which leads to blindness. Glaucoma harms the optic nerve cells that transmit graphic information to the brain. Hence it is important to detect glaucoma in eyes. Cup-to-Disc Ratio (CDR) is commonly used as an important parameter for glaucoma screening, involving segmentation of the optic cup on fundus images. A novel approach is proposed using the intensity values and size of the cup and disc. The proposed method uses the radius of the cup and disc for feature extraction. The features are classified using Support Vector Machine (SVM) classifier. The proposed method uses RIM-ONE dataset for evaluation. It achieves 99% specificity at 82% sensitivity with 0.863 AUC.

References

2. U.R., Chau, K. C., Ng, E. Y. K., Wei, W., and Chee, C., “Application of higher order


17. A. Ramaswamy, et al., ”A polar map based approach using retinal fundus images for glaucoma detection,” Second Ophthalmic Medical Image Analysis International Workshop, OMIA 2015


20. Yun, Wong Li et al., “Glaucoma Classification Using Brownian Motion and Discrete Wavelet Transform”, Journal of Medical Imaging and Health Informatics, 2014


Index Terms

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Keywords

Optic cup, Optic disc, SVM classifier, Retinal rim