Geometrical Feature Extraction for Glaucoma Detection

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Authors:
M. Arulmary, S. P. Victor

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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

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Index Terms

Computer Science       Image Processing

Keywords

Optic cup, Optic disc, SVM classifier, Retinal rim