

Title: Detection of Primary Open Angle Glaucoma Based on Deep CNN Using Fundus Images(Conference Paper)

AUTHOR

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Abstract

The early and accurate diagnosis of glaucoma, a primary cause of permanent blindness, is critical for efficient treatment and prevention of vision loss. Although the exact causes of glaucoma are not yet fully understood, it is thought to be a result of several factors, including raised pressure inside the eye and decreased blood supply to the optic nerve. We have developed a convolutional neural network model for accurate detection of glaucoma. Methods based on deep learning have been effective at classifying diseases in retinal fundus images, facilitating in the evaluation of the growing number of images. The goal of this work is to create and train a unique deep CNN model that makes use of the connections between related eye-fundus tasks and metrics used to identify glaucoma. We have meticulously selected two distinct datasets to underpin this research endeavor: the ACRIMA dataset and the LAG dataset. Notably, our model attains a remarkable accuracy score of 99.29% on the ACRIMA dataset and an equally commendable accuracy score of 97.22% on the LAG dataset. This performance eclipses that of the majority of contemporary deep CNN models, underscoring the prowess and sophistication of our approach. © 2023 IEEE.

Author keywords

CNN,deep learningfundus, image,glaucomaimage, classification

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