

Ocular Disease Recognition and Detection using VGG Algorithm

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Abstract: *The detection of ocular diseases is the most interesting point for the Optometrist. Due to the cost of the devices that discover and classify the different types of ocular disease. Artificial Intelligence (AI) based image processing and Machine Learning are currently utilized to classify and detect ocular disease. In this chapter, we present an improved classification model based on an improved VGG to classify the ocular disease of the stored eye image datasets. The dataset was collected and prepared to generate the image list and then the data are divided into 80% training and the remaining 20% for testing. We highlighted to classify the cataract and diabetes disease from the eye ocular images. The proposed pre-trained model is tested based on deep neural networks based on VGGNet. We utilized VGGNet-16 and VGGNet-19 and applied the Adam optimizer to improve the results of VGGNet and tackle the overfitting problem.*

Keywords: Image processing, Ocular disease, Deep learning, VGG, Machine Learning

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