

Diabetic Retinopathy Detection

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Abstract: *Diabetic retinopathy is a common complication of diabetes that can lead to vision loss if not detected and treated early. Detecting diabetic retinopathy through retinal images is an important task in healthcare. In recent years, deep learning-based approaches have shown promising results for diabetic retinopathy detection. These approaches typically involve training a convolutional neural network on large datasets of retinal images labeled with diabetic retinopathy severity levels. The trained model can then be used to predict the severity level of new retinal images. Various techniques such as data augmentation, transfer learning, and assembling can be used to improve the performance of these models. Diabetic retinopathy detection has the potential to improve patient outcomes and reduce healthcare costs by enabling early intervention and treatment. Diabetic retinopathy is a common complication of diabetes that affects the blood vessels in the retina, the light-sensitive tissue at the back of the eye. It is a leading cause of vision loss among adults with diabetes and can progress without any noticeable symptoms until vision is severely affected. Early detection and treatment are critical to prevent vision loss and blindness. Traditionally, diabetic retinopathy has been detected through manual examination of retinal images by trained ophthalmologists or optometrists. However, this process can be time-consuming, and costly, and may not be widely available, particularly in low-resource settings. With the advancement of computer vision and deep learning techniques, automated diabetic retinopathy detection through retinal images has become an active research area in recent years. Deep learning models have shown promising results for detecting diabetic retinopathy with high accuracy and speed, making it possible to screen large no. of patients.*

Keywords: Diabetic Retinopathy

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