Abstract

People suffer from so many diseases in today’s era. It has become imperative to find either solutions to these diseases or detect them during early stages so that they can be prevented or cured. Glaucoma is one of the eye disorders and is one of the leading causes of blindness. It is a disease that gradually degenerates the eye vessels causing vision loss in the patient. This paper discusses the data mining techniques like Decision Tree, Linear Regression and Support Vector Machine that have been used for diagnosis of glaucoma in the retinal image. Parameters obtained from Perimetry and Stratus Optic Coherence Test (OCT) have been fed to each technique to find out their performance in terms of accuracy, sensitivity and specificity. The researcher have compared results obtained from the Decision Tree, Linear Regression and Support Vector Machine (SVM) and found that Decision Tree and Linear Regression Model performs much better than SVM for diagnosis of Glaucoma giving accuracy of 99.17%, 92.56% and 70.25% respectively. The specificity of Linear Regression and SVM is 97.56% and 96.34% respectively.
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Index Terms

Computer Science  Artificial Intelligence

Keywords

Glaucoma, Cup to Disc Ratio(CDR), Data Mining, Decision Tree , SVM and Linear Regression.