Glaucoma is the term applied to an eye disease that gradually result in loss of vision by permanently harming the optic nerve, the nerve that transmits visual pictures to the brain. Glaucoma is the second leading cause of blindness worldwide. The retina is the deepest layer in the eye and the retinal nerve filaments transmit the visual sign from the photoreceptors in the eye to the mind through the pack going out of the eye, known as the optic nerve. Glaucoma leads to consistent and expedient harm of the retinal nerve fiber layer and consequently can prompt lasting visual impairment. Thus the finding of glaucoma at a prior stage is imperative for its treatment.

Current tests using intraocular pressure (IOP) are not sufficiently delicate for populace based glaucoma screening. Glaucoma can be detected by finding out CDR. CDR Gives Cup to Disc ratio of Optic Cup and Optic Disc. CDR will be finding out by calculating Vertical diameter of Optic cup (OC) and Vertical diameter of Optic disc (OD).
To find out Optic Disc and Optic Cup, Kekre’s LUV color space will be applied along with k-means clustering. On the off chance that the CDR proportion surpasses threshold level 0.6 it shows high risk of Glaucoma for the tried patient.

References


Index Terms

Computer Science

Pattern Recognition

Keywords

Fundus retinal image, glaucoma, k-Means clustering, Kekre’s LUV, YCbCr, YUV