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## School of Computer Science and Engineering

**Programme : B.Tech(CSE)**

**Course Title : Deep Learning: Principles and Practices**

**Course Code : CSE1016**

**Slot : B2**

# Title:

CATARACT PREDICTON USING EYE SCAN IMAGES

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# CATARACT PREDICTON USING EYE SCAN IMAGES

## ABSTRACT

Cataract is defined as a clouding of the lens of the eye that causes visual defects. The longer a patient suffers from cataract or late treatment, the more severe the damage will be to a cataract sufferer's vision. If not treated it may even lead to blindness. The World Vision Report released by the World Health Organization (WHO) on October 8, 2019 also pointed out that high costs involved in accessing eye care, especially, for rural populations was a major driver of visual impairment. An ophthalmologist can diagnose cataracts by looking at the degree of brightness from the fundus photo.

Our approach uses the convolutional neural network (CNN) which is used for pattern recognition (including images) which can help automate image classification, in this case, the retinal fundus data image and help us determine whether the patient is suffering from cataract or not. This proposes to determine optimal CNN with a set number of epochs for the case of cataract identification. We will be using ResNet-152 model which will be incorporated in the system so any end user can check for the cataract in their eye. All he/she has to do is to click an image of the eye and upload it to the server. Then using the trained model the image will be processed and will determine if cataract is there or not. If cataract is found, then he would be advised to visit the nearest ophthalmologist.

## DATASET

For this project, we will use the cataract images dataset from Kaggle with four directories as follows:

The first directory includes 300 files with normal eye images.

The second directory includes 100 files with images of eyes where cataract can be spotted in the scan.

The third directory includes 101 files with images of eyes detected with glaucoma.

The fourth directory includes 100 files with images of eyes which have some retina disease.

Link to the dataset: cataract dataset | Kaggle

## TEAM MEMBERS

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