**NAME OF THE PROJECT**

DIABETIC RETINOPATHY DETECTION USING DEEP LEARNING

**NAME OF THE STUDENTS (REGISTER NUMBERS)**

Charulatha.K(211417104042)

Jayasri.K (211417104092)

Kamathampalli jayasri reddy(211417104105)

**NAME OF THE GUIDE**

Kiruthika.K (Assistant Professor)

**ABSTRACT**

Diabetic Retinopathy is a complication of diabetes that is caused due to the changes in the blood vessels of the retina and is one of the leading causes of blindness in the developed world. Up to the present, Diabetic Retinopathy is still screened manually by ophthalmologist which is a time consuming process and hence this paper aims at automatic diagnosis of the disease into its different stages using deep learning. In our approach, we trained a Deep Convolutional Neural Network model on a large dataset consisting of around 35,000 images to automatically diagnose and thereby classify high resolution fundus images of the retina into five stages based on their severity. Within this paper, an application system is built which takes the input parameters as the patient’s details along with the fundus image of the eye. A trained deep convolutional neural network model will further extract the features of the fundus images and later with the help of the activation functions like relu and softmax along with optimizer like Adam an output is obtained. The output obtained from the Convolutional Neural Network (CNN) model and the patient details will collectively make a standardized report.