

## **Project**

**Submitted by :** Varadambika A

**Topic :** Diabetic Retinopathy Detection using Deep Neural Network

**Guide :** Ms. Jucy Vareed

### **About Project :**

Eye is one of the most important organ for sense of sight, allowing us to learn more about the surrounding world than we do with any of the other four senses. We perceive up to 80 percentage of all impressions by means of our sight. We use our eyes in almost every activity we perform, whether reading, watching television, and in other countless ways. It will be very difficult to do our daily activities if we have no vision capability. Diabetic Retinopathy is a medical condition which effectenes and can cause blindness.

Diabetic retinopathy or other vice known as diabetic eye disease, is a condition which occurs due to the damage in retinal blood vessels. People with diabetes have more probability to occur diabetic retinopathy. Retinal blood vessels get damaged due to the increased blood sugar level. These retinal blood vessels can swell and leak. Or they can close, stopping blood from passing through the tissues in retina. Sometimes abnormal new blood vessels grow on the retina. All of these change scan steal your vision. Hence, it is necessary to detect as well as diagnose DR at the earliest stage. Diabetic retinopathy has mainly four stages known as mild, moderate, severe and proliferative diabetic retinopathy. Different symptoms will be observed in each of these stages and the efficient detection of these symptoms can diagnose DR. The project aims to develop a system which is capable of detecting the presence of diabetic retinopathy as well as its different stages by using the technique of deep neural network.

### **Publications:**

- Paper : Diabetic Retinopathy Feature Extraction Methods  
Conference : ICICT-2018  
Journel : IEEE  
Status : Presented
- Paper : A Comparartive Study on Deep Learning Techniques for Action Recognition  
Conference : ICICT-2018  
Journel : IEEE  
Status : Presented