PROJECT TITLE:

Deep Learning Fundus Image Analysis for Early Detection of Diabetic Retinopathy.

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PROBLEM STATEMENT:

Diabetic Retinopathy (DR) can cause abnormal blood vessels to grow out of the retina and block fluid from draining out of the eye. This cause a type of glaucoma i.e. Vision loss and blindness .Early detection is important to prevent permanent vision loss.

EXISTING DIAGNOSE METHODOLOGY:

Diabetic retinopathy is diagnosed with a comprehensive dilated eye exam.

This is a high time consuming and cost consuming process and prone to misdiagnosis unlike computer-aided diagnosis systems.

CAUSE:

Diabetic retinopathy is a complication of diabetes, caused by high blood sugar levels damaging the back of the eye which may lead to loss of vision permanently

STAGES:

Diabetic retinopathy has some symptoms of spots or dark string floating in the vision, blurred vision, fluctuating vision. It have been classified into four stages mild, moderate, non proliferative and proliferative.

EFFECTS:

Vision disorder, blurred vision, distorted vision will occur. This problem occurs commonly for Diabetic patient.

OBJECTIVE:

To provide a testing method for diabetic patient using AI to detect the Diabetic Retinopathy caused due to diabetics at its early stages accurately to avoid complications or permanent blindness at later stages.