

Diabetic Retinopathy Detection

Charmi S¹, Harshitha K S², Lekhana G³, Manasvi B S⁴, Yathish Aradhya B C⁵

^{1,2,3,4}B.E. Scholars, Department of Computer Science and Engineering

⁵Professor, Department of Computer Science and Engineering

Kalpataru Institute of Technology, Tiptur, Karnataka, India

Abstract: “Diabetic retinopathy is a major complication of diabetes and a leading cause of preventable vision loss. It is caused by prolonged high blood sugar, which damages the retina's blood vessels. This damage leads to fluid leakage and retinal swelling. In its early stages, the condition often because its initial stages often present no warning signs, routine eye screenings are vital. If the condition remains untreated, it can advance to more severe, vision-threatening complications. These changes pose a high risk of permanent blindness. Due to the growing prevalence of diabetes, early detection through systematic screening is a critical public health priority. Timely identification allows for interventions and management strategies that can effectively prevent severe vision loss.”.

Keywords: Deep Learning, CNN, Diabetic Retinopathy, Medical data analysis