

Project Design Phase-I

Problem-Solution fit

Date	1 October 2022
Team ID	PNT2022TMID36587
Project Name	Deep Learning Fundus Image Analysis for Early Detection of Diabetic Retinopathy.

<p>1.PATIENTS SEGMENTS</p> <p>The early detection is used for the patients. The Patients eye can be detected using the fundus image and can be stored in the database. This is more useful than the manual detection by the doctors in older days.</p>	<p>6. PATIENTS LIMITATIONS</p> <p>It is important to get a comprehensive dilated eye exam at least once a year if the patient is affected has diabetes.</p>	<p>5.AVAILABLE SOLUTIONS</p> <p>Non efficient image processing algorithms were used in earlier systems. This traditional approach gives lower accuracy and is time consuming. This drawback of the existing system propelled us towards the idea for developing a system that could ease this effort.</p>
<p>2.PROBLEM/PAINS</p> <p>There are four stages- mild, moderate, non proliferate, proliferate Patients who are not treated for long time may cause the patients to lose a vision.</p> <p>If the problems can be caught early, treatment can help prevent or reduce vision</p>	<p>9.PROBLEM ROOT/CAUSE</p> <p>Diabetic Retinopathy is caused by the high sugar levels in blood. Overtime, having too much can damage the patients retina.</p> <p>The most common cause are diabetes and hypertension.</p>	<p>7.BEHAVIOR</p> <p>Non efficient image processing algorithms were used in earlier systems. This traditional approach gives lower accuracy and is time consuming.</p> <p>In our project we identify the patients diseases using fundus image. Then it recommends the treatment to be used. Our project's accuracy is more because we are using Artificial Intelligence.</p>
<p>3.TRIGGERS TO ACT</p> <p>The Diabetic Retinopathy is the best diagnosed with a comprehensive dilated eye exam. For this exam, drops placed in patients eyes widen(dilate) their pupils to know the better view inside the patients eyes.</p> <p>4.EMOTIONS</p> <p>This early detection of Diabetic Retinopathy make the patient to identify his/her disease easily through this diagnosis.</p>	<p>10.YOUR SOLUTION</p> <p>Patients can reduce their risk of developing diabetic retinopathy by keeping their blood sugar levels, blood pressure and cholesterol levels under control.</p>	<p>8.CHANNELS OF BEHAVIOR</p> <p>Strategies for preventing Diabetic Retinopathy includes- Effective diabetes management and Regular eye examinations. This will help the patients to delay the development of retinopathy. Early detection and treatment can usually prevent severe vision loss.</p>