

Project Design phase-I

Problem-Solutionfit

Date	15ctober2022
TeamID	PNT2022TMID26809
ProjectName	DeepLearningFundusImageAnalysisforEarlyDetectionofDiabeticRetinopathy.

<p>1. PATIENTS SEGMENTS</p> <p>The early detection is used for the patients. The patient's 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 doctor 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 by 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 of 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 patient to lose 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. Over time, having too much can damage the patient's 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 patient's diseases using fundus image. Then we recommend the treatment to be used. Our project's accuracy is more because we are using Artificial Intelligence.</p>
<p>3. TRIGGER TO ACT</p> <p>The Diabetic Retinopathy is the best diagnosed with a comprehensive dilated eye exam. For this exam, drops placed in the patient's eyes widen (dilate) their pupil so that they can see better inside the patient's eyes.</p> <p>4. EMOTIONS</p> <p>This early detection of Diabetic Retinopathy makes the patient 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 include - Effective diabetes management and Regular eye examinations. This will help the patient to delay the development of retinopathy. Early detection and treatment can usually prevent vision loss.</p>