

Project Title: Deep Learning Fundus Image Analysis for Early Detection of Diabetic Retinopathy

Project Design Phase-I - Solution Fit Template

Team ID-PNT2022TMID27170

<p>1.PATIENT SEGMENT(S)</p> <p>1.The condition can develop in anyone who has type 1 or type 2 diabetes.</p> <p>2.The longer you have diabetes and the less controlled your blood sugar is, the more likely you are to develop this eye complication</p>	<p>6. PATIENT CONSTRAINTS</p> <p>Laser surgery-costly and uncomfortable for patient as a very bright light is flashed in the patient's eye.</p> <p>Medicines control-Not effective specially in case where the DR is already residing.</p>	<p>5.AVAILABLE SOLUTIONS</p> <p>the main solutions are: laser treatment-to treat the growth of new blood vessels at the back of the eye(retina) in case of proliferative diabetic retinopathy.</p> <p>Eye injections-to treat severe maculopathy that's threatening your sight.</p> <p>Eye surgery- to remove blood or scar tissue from the eye from the eye if laser treatment is not possible because retinopathy is too advanced.</p>
<p>2. PROBLEMS</p> <p>Complications can lead to serious vision problems:</p> <ul style="list-style-type: none"> • Vitreous hemorrhage. The new blood vessels may bleed into the clear, jellylike substance that fills the center of your eye. ... • Retinal detachment. • Glaucoma. • Blindness. 	<p>9.PROBLEM ROOT CAUSE</p> <p>1.This common eye disease is the leading cause of blindness in working-age adults.</p> <p>2.Diabetic retinopathy is caused when high blood sugar damages blood vessels in the retina (a light-sensitive layer of cells in the back of the eye).</p>	<p>7. BEHAVIOUR</p> <p>Difficulty driving, especially at night, and trouble reading were noted with all levels of severity.</p> <p>Participants with PDR and decreased visual acuity have foregone.</p> <p>They are many other important life aspects such as work, reading and sports.</p>

<p>3. TRIGGERS</p> <p>Diabetic retinopathy is caused by having high blood glucose levels for long periods of time. Prolonged bouts of high sugar glucose levels can weaken and damage the small blood vessels within the retina. This may cause haemorrhages, exudates and even swelling of the retina. Good blood glucose control helps to lower diabetic retinopathy risks.</p>	<p>10.YOUR SOLUTION</p> <p>You can reduce your risk of developing diabetic retinopathy, or help stop it getting worse, by keeping your blood sugar levels, blood pressure and cholesterol levels under control.</p>	<p>8.CHANNELS OF BEHAVIOUR</p> <p>1.ONLINE: Treatment, which depends largely on the type of diabetic retinopathy you have and how severe it is, is geared to slowing or stopping the progression.</p> <p>2.OFFLINE- Patients with active PDR should avoid physical activity that involves straining, jarring, jogging, high-impact aerobics or Valsalva-like maneuvers.</p>
<p>4.EMOTIONS :</p> <p>Diabetes requires lifelong self-care and discipline, and many people with diabetes self-manage the disease in the absence of any day-to-day positive feedback.</p> <p>Emotional support can be defined as the expression of empathy and understanding toward an individual living with a problem.</p>		