

Project Design Phase

Problem – Solution

Date	14 February 2026
Team ID	LTVIP2026TMIDS88398
Project Name	Deep Learning Fundus Image Analysis for Early Detection of Diabetic Retinopathy
Maximum Marks	2 marks

Problem – Solution :

P1: My Target Group	P2: Their Existing Situation	P3: Their Problem
I am addressing... Diabetic patients who require regular retinal screening and ophthalmologists who need efficient diagnostic support.	Currently they want to... <ul style="list-style-type: none">• Detect Diabetic Retinopathy at an early stage.• Prevent vision loss through regular screening.• Receive accurate diagnosis quickly	But they are... <ul style="list-style-type: none">• Facing delays in early detection.• Dependent on manual examination• Receive actuate high screening costs 
Define the target audience and provide relevant criteria for them: <ul style="list-style-type: none">• Patients diagnosed with Type-1 or Type-2 Diabetes• Individuals at risk of Diabetic Retinopathy (DR)• Hospitals and eye clinics performing retinal screening• Ophthalmologists managing large volumes of fundus imag	Describe the state, triggers, habits and medium of your audience: <ul style="list-style-type: none">• Patients visit hospitals for manual retinal screening• Diagnosis depends completely on specialist availability• Screening is time-consuming and sometimes expensive.• Rural patients have limited access to eye specialists	Define the problem, annoyance, and costs: <ul style="list-style-type: none">• Late diagnosis may lead to permanent blindness.• Manual screening increases workload on do• Financial burden due to repeated hospital visits• Limited scalability of traditional diagnosis methods

S1: How I Solve It	S2: My Behavior Change	S3: Proof That It Works
<p>I offer a way...</p> <p>An AI-powered Deep Learning system that analyzes fundus retinal images and automatically classifies the stage of Diabetic Retinopathy.</p>	<p>The change for them is...</p> <ul style="list-style-type: none"> ➢ From manual and delayed diagnosis ➢ to automated and quick prediction ➢ From limited access to specialists ➢ to clear DR stage classification 	<p>I know they will...</p> <p>Model trained on tabulated retinal image dataset</p> <p>Achieves high classification accuracy during testing phase</p>

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