

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
<p>I am addressing...</p> <p>Diabetic patients who require regular retinal screening and ophthalmologists who need efficient diagnostic support.</p> <p>Define the target audience and provide relevant criteria for them:</p> <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 images	<p>Currently they want to...</p> <ul style="list-style-type: none">• Detect Diabetic Retinopathy at an early stage.• Prevent vision loss through regular screening.• Receive accurate diagnosis quickly <p>Describe the state, triggers, habits and medium of your audience:</p> <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	<p>But they are...</p> <ul style="list-style-type: none">• Facing delays in early detection.• Dependent on manual examination• Receive accurate high screening costs 🏠🌟 <p>Define the problem, annoyance, and costs:</p> <ul style="list-style-type: none">• Late diagnosis may lead to permanent blindness.• Manual screening increases workload on doctors• Financial burden due to repeated hospital visits• Limited scalability of traditional diagnosis methods

S1: How I Solve It I offer a way... An AI-powered <i>Deep Learning</i> system that analyzes fundus retinal images and automatically classifies the stage of Diabetic Retinopathy.	S2: My Behavior Change The change for them is... <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 	S3: Proof That It Works I know they will... Model trained on labeled retinal image dataset Achieves high classification accuracy during testing phase
S1: How I Solve It I offer a way... An AI-powered Deep Learning system that analyzes fundus retinal images and automatically classifies the stage of Diabetic Retinopathy.	S2: My Behavior Change The change for them is... <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 	S3: Proof That It Works I know they will... <ul style="list-style-type: none"> Model trained .. Alcator, Senative d23-ll canaob dataset Achieves high classification ijmandeng deployment for dee users