Ideation Phase
Define the Problem Statements

Date	02/02/2026
Team ID	LTVIP2026TMIDS83275
Project Name	Deep Learning Fundus Image Analysis for Early Detection of Diabetic Retinopathy
Maximum Marks	2 Marks

Customer Problem Statement Template:

Create a problem statement to understand your customer's point of view. The Customer Problem Statement template helps you focus on what matters to create experiences people will love.

A well-articulated customer problem statement allows you and your team to find the ideal solution for the challenges your customers face. Throughout the process, you'll also be able to empathize with your customers, which helps you better understand how they perceive your product or service.

I am	Describe customer with 3-4 key characteristics - *who are they?*	Describe the customer and their attributes here
I'm trying to	*List their outcome or "job" the care about - what are they trying to achieve?*	List the thing they are trying to achieve here
but	Describe what problems or barriers stand in the way – *what bothers them most?*	Describe the problems or barriers that get in the way here
because	Enter the "root cause" of why the problem or barrier exists – *what needs to be solved?*	Describe the reason the problems or barriers exist
which makes me feel	Describe the emotions from the customer's point of view – *how does it impact them emotionally?*	Describe the emotions the result from experiencing the problems or barriers

Reference: https://miro.com/templates/customer-problem-statement/

Example:

Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
PS-1	I am a diabetic patient	I'm trying to get my eyes screened for diabetic retinopathy at an early stage	But the screening process is slow and requires specialist consultation	Because manual diagnosis of fundus images needs experienced ophthalmologists	Which makes me feel worried and anxious about possible vision loss
PS-2	I am an ophthalmologist	I'm trying to analyze a large number of retinal fundus images efficiently	But reviewing each image manually is time-consuming and tiring	Because detailed examination of retinal blood vessels requires careful attention	Which makes me feel overloaded and concerned about missing early-stage cases
PS-3	I am a rural healthcare provider	I'm trying to provide retinal screening services to diabetic patients	But there is limited access to specialized eye doctors	Because advanced medical facilities are not available in remote areas	Which makes me feel helpless in preventing avoidable blindness
PS-4	I am a hospital administrator	I'm trying to improve the efficiency of diabetic retinopathy screening programs	But manual screening increases workload and cost	Because trained specialists are limited and expensive	Which makes me feel challenged in managing healthcare resources effectively

Problem Background

Diabetic Retinopathy (DR) is a severe complication of diabetes that damages the blood vessels in the retina. If not detected early, it can lead to irreversible blindness. Early detection is critical for preventing vision loss.

However, manual screening of retinal fundus images requires expert ophthalmologists and is time-consuming. In rural and underserved areas, access to specialists is limited.

Problem Statement

There is a need for an automated, accurate, and scalable system that can analyze fundus images and detect diabetic retinopathy at an early stage using deep learning techniques.

Proposed Idea

To develop a web-based deep learning system that:

- Accepts retinal (fundus) images
- Analyzes them using a trained CNN model
- Classifies the severity of diabetic retinopathy
- Displays results instantly to the user

Expected Outcome

- Early detection assistance tool
- Reduced workload for ophthalmologists
- Faster screening process
- Support for preventive healthcare