

Ideation Phase

Define the Problem Statements

Date	19 September 2022
Team ID	PNT2022TMID27170
Project Name	Deep Learning Fundus Image Analysis for Early Detection of Diabetic Retinopathy
Maximum Marks	2 Marks

Customer Problem Statement Template:

Diabetics is a globally prevalent disease that can cause visible microvascular complications such as diabetic retinopathy and macular edema (swelling in the part retina) in the human eye retina, the images of which are today used for manual disease screening and diagnosis. This labor-intensive task could greatly benefit from automatic detection using deep learning technique. Here we present a deep learning system that identifies referable diabetic retinopathy comparably or better than presented in the previous studies, although we use only a small fraction of images ($<1/4$) in training but are aided with higher image resolutions. We also provide novel results for five different screening and clinical grading systems for diabetic retinopathy and macular edema classification, including state-of-the-art results for accurately classifying images according to clinical five-grade diabetic retinopathy and for the first time for the four-grade diabetic macular edema scales. These results suggest, that a deep learning system could increase the cost-effectiveness of screening and diagnosis.

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	Mild NPDR	Find the area of balloon-like swelling in the retinas	the picture visuals cannot be clear	because the microaneurysms may leaks fluid into retina	cannot depict clearly
PS-2	Moderate NPDR	Blood vessels that nourish the retina may swell	these may lose their ability to transport blood	does not predict	findout the stage
PS-3	Severe NPDR	customer login and then upload picture	picture may not be upload	some error occured	cannot be predicted
PS-3	Severe NPDR	customer login and then upload picture	cannot be predicted	picture	upload correct picture format
PS-4	PDR	customer login	cannot depicted	the swelled region is fluid in picture	clear the picture properly
PS-5	login issue	login by user name	the username or password wrong	this cannot match with database	enetr correct password