Project Design Phase-I
Proposed Solution

Date	29 October 2022
Team ID	PNT2022TMID41433
Project Name	Deep Learning Fundus Image Analysis for Early Detection ofDiabetic Retinopathy
Maximum Mark	2 Marks

Define CS, fit into CC. Explore AS

1.CUSTOMER SEGMENT(S) CS	6. CUSTOMER CONSTRAINTS CC	5. AVAILABLE SOLUTIONS AS
On the basic type, fast and robust one to extract exudates in colour eye fundus image which is based on mathematical morphology where Blood vessels extraction is carried out which is followed by extraction of the hard exudates and optic disc and finally detection of the optic disc which is used for distinguishing it from exudates.	As there are a number of image taken needs to undergoes pre-processing and augmentation, some features of images may be missed out, so Such techniques should be used it not be preserved. Multiple images should be taken for every patient which gives the possibility of classifying the images.	Brought up to automate the detection process by using machine learning and deep learning. A lot of pre-processing And augmentation was done to standardize the data in desired format and remove unwanted noises.

Focus on J&P, tap into BE, understand RC

2.JOBS-T0-BE-DONE/ PROBLEM J&P	9. PROBLEM ROOT CAUSE RC	7.BEHAVIOUR BE
It is easy to observe the issues in eye and it is easy way to assist the peoples easily to identify the diabetic region and helps to prevent from the danger. Detection and recognition of disease using deep learning are very efficient in providing information about eye at its earliest.	The abnormal blood vessels associated with diabetic retinopathy stimulate the growth of scare issues blood can lead to bl of the tiny blood vessels that nourish the retina, cutting off its blood supply.	In general, we may not able to identify the number of cases on area of the eye. It can be able to respond quickly It is easy to use It is able to provide precise decision based on the disease analysis requirement of internet speed.

Identify strong TR & EM.

3.TRIGGERS TR What triggers customers to act? i.e seeing neighbour installing solar panels, reading a more efficient solution in the news.	**10. YOUR SOLUTION** SL The proposed method is a fast and robust one to extract exudates in colour eye fundus image which is based on mathematical morphology where Blood vessels extraction is carried out which is followed by extraction of the hard exudates and optic disc and finally detection of the optic disc which is used for distinguishing it from exudates.	**8. CHANNELS OF BEHAVIOUR** CH 8.1 ONLINE What kind of actions do customers take online? Extract online channels from #7 8.2 OFFLINE What kind of actions do customers take offline? Extract offline channels from #7 and use them for customer development.
4.EMOTIONS: BEFORE/AFTER How do customers feel when they face a problem or a job and afterwards? i.e lost, insecure > confident, in control - use it in your communication strategy & design		