Project Design Phase-I - Solution Fit

Project Title: Deep Learning Fundus Image Analysis for Early Detection of Diabetes Retinopathy   **Team ID:** PNT2022TMID08044

Define CS, fit into CC

1. CUSTOMER SEGMENT(S) — CS

Who is your customer?

The customer here is the Eye specialist hospitals, Diagnosis center and also eye camps where the patients suffering from Diabetes Retinopathy is included

6. CUSTOMER CONSTRAINTS — CC

What constraints prevent your customers from taking action or limit their choices of solutions? i.e. spending power, budget, no cash, network connection, available devices.

Here, the constraints includes application where the model can be fit in for scanning and also there must be network connection while scanning.
The budget of this product can be paid as per the usage

5. AVAILABLE SOLUTIONS — AS

Which solutions are available to the customers when they face the problem or need to get the job done? What have they tried in the past? What pros & cons do these solutions have? i.e. pen and paper is an alternative to digital notetaking

The available solution includes manual diagnosis of the Diabetes Retinopathy and this might be time consuming and high cost

Explore AS, differentiate

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

2. JOBS-TO-BE-DONE / PROBLEMS — J&P

Which jobs-to-be-done (or problems) do you address for your customers? There could be more than one; explore different sides.

- Checking the patient with diabetes where the severity in this case may lead to loss of vision.
- Scanning of the retina with the trained model and get the result of the patient

9. PROBLEM ROOT CAUSE — RC

What is the real reason that this problem exists? What is the back story behind the need to do this job? i.e. customers have to do it because of the change in regulations.

The problem still exist because the Diabetes Retinopathy is irreversible process, as it cannot be cured and it can be detected at early stage so the patient can be prevented from loss of eye vision

7. BEHAVIOUR — BE

What does your customer do to address the problem and get the job done? i.e. directly related: find the right solar panel installer, calculate usage and benefits; indirectly associated: customers spend free time on volunteering work (i.e. Greenpeace)

The customer tries to find the prior solution , where the detecting of Diabetes Retinopathy is a time consuming process , an early and efficient process can be implemented and get as a solution for the problem that is causing severity of the patient's situation.

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

Identify strong TR & EM

3. TRIGGERS — TR

What triggers customers to act? i.e. seeing their neighbour installing solar panels, reading about a more efficient solution in the news.

Regular checkup of diabetes where it includes sugar blood test, intake of insulin, maintaining healthy diet and medicines

4. EMOTIONS: BEFORE / AFTER — EM

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.

When the patient is suffering from the problem they might face difficulties than usual after undergoing certain procedures for the cure of their problem it will be easier for them to maintain balanced life style

10. YOUR SOLUTION — SL

If you are working on an existing business, write down your current solution first, fill in the canvas, and check how much it fits reality.
If you are working on a new business proposition, then keep it blank until you fill in the canvas and come up with a solution that fits within customer limitations, solves a problem and matches customer behaviour.

Here the solution provided will be early detection of Diabetes Retinopathy using the transfer learning technique which can detect without any delay

8. CHANNELS of BEHAVIOUR — CH

ONLINE
What kind of actions do customers take online? Extract online channels from #7

Online consultation can be taken by the patients for their time being and easier way of contacting the doctors

OFFLINE
What kind of actions do customers take offline? Extract offline channels from #7 and use them for customer development.

Consulting the doctor, intake of insulin, medicines , etc . This can be an efffective way as the detection of Diabetes is easy.

Extract online & offline CH of BE