

## 1. CUSTOMER SEGMENT(S)

CS

The early detection is important for the diabetic patients as diabetic retinopathy is irreversible. The Diabetic retinopathy can be detected using the fundus image of the patient and can be stored in the database. This is more useful than the manual examination.

## 6. CUSTOMER CONSTRAINTS

CC

The diabetic retinopathy does not have any specific symptoms so they fail to notice the illness. Many people do not know about diabetic retinopathy and its adverse reaction.

## 5. AVAILABLE SOLUTIONS

AS

Laser treatment to treat the growth of new blood vessels at the back of the eye (retina) in cases of proliferative diabetic retinopathy, and to stabilize some cases of maculopathy. eye injections - to treat severe maculopathy that's threatening your sight.

## 2. JOBS-TO-BE-DONE / PROBLEMS

J&P

The problem is once the diabetic retinopathy is severe, it cannot be done.

And the severity of diabetic retinopathy results in serious eye illness and also results in losing vision. So, the early detection is important if the patient has diabetes.

## 9. PROBLEM ROOT CAUSE

RC

Diabetic retinopathy is caused by changes in the blood vessels of the retina, the light-sensitive layer of tissue at the back of the inner eye. In some people with diabetic retinopathy, the blood vessels in the retina may swell and leak fluid. In others, abnormal new blood vessels grow on the surface of the retina.

## 7. BEHAVIOUR

BE

This model helps in the early detection of diabetic retinopathy using the fundus images. It consumes less time than the manual examination. Also, accuracy is more compared to other techniques.

Identification System & Eng	<div>3. TRIGGERS</div> <div>TR</div> <div>The triggers in diabetic retinopathy patients are Spots or dark strings floating in your vision (floaters) Blurred vision. Fluctuating vision. Dark or empty areas in vision. Vision loss.</div>	<div>10. YOUR SOLUTION</div> <div>SL</div> <div>Our solution involves the deep learning model with fundus images that detect the severity of the diabetic retinopathy among diabetic patients and the apt diagnosis done after the early detection.</div>	<div>8.CHANNELS OF BEHAVIOUR</div> <div>CH</div> <div>The diabetic patients have to take the eye examination in the regular interval time. Then only retinopathy can be detected early and proper diagnosis can be done.</div>
	<div>4. EMOTIONS: BEFORE / AFTER</div> <div>EM</div> <div>Before: Adverse emotional responses include fear, anxiety. vulnerability, guilt, loss of confidence, anger, stress and self-perception issues. After: Early detection and diagnosis gives sense of hope among patients</div>		