 Purpose / Vision : Early Detection of Diabetic Retinopathy

**AS**

**5. AVAILABLE SOLUTIONS**

.

**CC**

**6. CUSTOMER CONSTRAINTS**

**CS**

**1. CUSTOMER SEGMENT(S)**

**Explore AS, differentiate**

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

**Deﬁne CS, ﬁt into CC**

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

**->** It may cause Loss of Independence for an individual.

**->** Poor diet, lack of physical activities and poor self-monitoring of glucose levels are some of the most common obstacles faced by DM patients(3-6).

**->** Methods of screening for diabetic retinopathy include direct and indirect ophthalmoscopy, stereoscopic color film fundus photography, mydriatic or nonmydriatic digital color and monochromatic photography.

**->** People affected by Diabetic Retinopathy are the customers.

**->** Diabetic Retinopathy can lead to other serious eye conditions in future.

**->** Distorted vision will cause inflammation in the eye.

**BE**

**7. BEHAVIOUR**

**RC**

**9. PROBLEM ROOT CAUSE**

**J&P**

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

**->** The exact cause of most types of diabetes is not unknown. In all cases sugar builds up in the bloodstream.

->This is because the pancreas doesn’t produce enough insulin.

**->** Both type 1 and type 2 diabetes may be caused by a combination of genetic or environmental factors.

**->** **Directly related:** Message conversion, Hand gesture, Mental damage, Difficulty to see.

**->** **Indirectly associated**: Empowered technology, completely paralyzed, noble cause, using sensors in day to day life, environmental threats affect their life difficulty in society.

**->** Make more discussions with a patient who has already tested.

**->** Accuracy and timely results are the problems.

**->** More research on specifications and reliability of the test.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Identify strong TR & EM** | **3. TRIGGERS TR**  **->** Patients are anxious and in need of instant results.  **->** They often google the symptoms and treatment.  **->** They feel insecure | **10. YOUR SOLUTION SL**  **->** We have to use multi-layer neural networks as deep NN.  **->** Due to the fact that data’s structure is Image, the best type of neural network satisfying our goal is **Convolutional Neural** **Networks**  **->** The steps are Pre-processing data, Normalization, Creating Deep Neural Network and final model. | 1. **CHANNELS of BEHAVIOUR CH**   CH8.1 ONLINE  **->** Giving them specialized equipment to supplement educational programs would help them become more mentally and emotionally healthy.  8.2 OFFLINE  **->** Their lives are mostly impacted by entering our direct society, which includes schools, colleges and workplaces. | **Extract online & ofﬂine CH of BE** |
| **4.EMOTIONS: BEFORE/AFTER EM**  BEFORE :  Insecurity, Lack of Confidence, Dependent.  AFTER :  Secured, Confidence, Independent. |