Project Design Phase-I - Solution Fit Template

A Gesture-Based Tool For Sterile Browsing Of Radiology Images

Define CS, fit into CC

1. CUSTOMER SEGMENT(S) CS

- Recognizing hand signs
- It decodes the hand sign as a text format
- Can apply if conditions to control some of the actions like reshaping, blur, flip of the given sign

6. CUSTOMER CONSTRAINTS CC

Ideally gesture recognition should be based on photo of a single gesture against a clear background in well lit conditions but real-life conditions are hardly ever like that.

5. AVAILABLE SOLUTIONS AS

- Enhanced and brief data set of complex and defected images to recognized any kind of gesture
- Training the data set to identified images through in skin colored and static background

Explore AS, differentia

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

2. JOBS-TO-BE-DONE / PROBLEMS J&P

- Multiple signs can't be identified
- Can't decode blured images
- Can't identified complex gestures
- Proper segmentation of skin colored objects against a complex static background

9. PROBLEM ROOT CAUSE RC

- Non- standard background
- Movement
- Combination of movements
- Diversity of gestures
- Fighting the lag
- Classifying unknown gestures

7. BEHAVIOUR BE

The camera detects hand movements, and a machine learning algorithm segments the image to find hand edges and positions. It is a difficult part, but there are solutions ready to use example. Media-Pipe from Google.

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

3. TRIGGERS TR

Gestures does not limit the user to single point of input by various forms of interactions

10. YOUR SOLUTION SL

An image classifier takes a photograph or video and learns how to classify it into one of the provided categories.
This can be used in consumer electronics, and health care industries.

8.CHANNELS of BEHAVIOUR CH

To enable gesture recognition in mass scale, computations need to be done on smartphones, TV etc. more advanced computations are performed on remote servers, and it breaks our privacy

Identify strong TR & EM

4. EMOTIONS: BEFORE / AFTER EM

- There is a common, intuitive sense for hand gesture directions and commands. For e.g., moving hand upwards means increasing
- Controlling devices at home seems natural and thus increasing user Experience which could be complicated With commands without gesture recognition system

Identify strong TR & EM