## **Project Title: Statistical Machine Learning Approaches** to Liver Disease Prediction

### **Project Design Phase-I - Solution Fit**

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# CC

# 1. CUSTOMER SEGMENT(S)



Our customers are the patients who are suffering from liver disease.

Many diseases caused by drugs, poisons, or too much alcohol. Examples include fatty liver disease and cirrhosis.

### 6. CUSTOMER CONSTRAINTS



The following are the customer constraints:

- Scope
- Cost
- Time Trust
- **Customer Satisfaction**

### 5. AVAILABLE SOLUTIONS



In earlier days, there is a traditional approach to diagnosing liver diseases are by using algorithms like

- Naïve Bayes Classifier
- **Support Vector Machines**
- **Back Propagation Neural** Network
- Decision tree
- Random tree etc..

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



The problems encountered are.

- Accuracy
- Identify
- Risk Involved

Application should be user friendly and website crashes should be avoided.

### 9. PROBLEM ROOT CAUSE



Difficult to acquires proper dataset.

Parameters should be able to predict any kind of liver disease.

Model may require more real time data to improve its accuracy

### 7. BEHAVIOUR

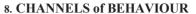


- © Customers avoid predictors if it is not user friendly.
- © They avoid the application if the results are not appropriate.
- © They may use other application which has better response.

### 3. TRIGGERS



### 10. YOUR SOLUTION





- <sup>©</sup> Web application is the one which is easily accessible as they don't like to download lots of apps in their mobile.
- Cost Effective

### 4. EMOTIONS: BEFORE / AFTER



- © People can easily access the application and can be able to diagnose the liver disease in their house itself.
- © Ensure the security of the customer's record.
- $\ ^{\ }$  To trust the predicted result we concentrate more on the accuracy.

### 10. YOUR SOLUTION

- © Try to develop the application with as many as possible to give more benefits to the consumer.
- © Try to develop the application with more accuracy.
- <sup>©</sup> An application accessible from anywhere at any time using their mobile or tablet or laptop.

### 8.1 ONLINE

- Searching online for symptoms and treatments.
- <sup>©</sup> People may able to access the application in the browser.

### 8.2 **OFFLINE**

- Booking appointments in hospitals.
- ${}^{\mathbb{C}}$  A group of blood tests called liver function tests can be used to diagnose liver disease.