Project Title: Statistical Machine Learning Approaches to Liver Disease Prediction   **Project Design Phase-I** - **Solution Fit**   **Team ID: PNT2022TMID35655**

Define CS, fit into CC

1. CUSTOMER SEGMENT(S)   CS

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   CC

The following are the customer constraints:
- Scope
- Cost
- Time
- Trust
- Customer Satisfaction

5. AVAILABLE SOLUTIONS   AS

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.,

Explore AS, differentiate

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

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

The problems encountered are,
- Accuracy
- Identify
- Risk Involved

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

9. PROBLEM ROOT CAUSE   RC

Difficult to acquires proper dataset.

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

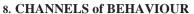Model may require more real time data to improve its accuracy

7. BEHAVIOUR   BE

→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.

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

3. TRIGGERS **TR**

→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 **EM**

→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 **SL**

→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.

→An application accessible from anywhere at any time using their mobile or tablet or laptop.

8. CHANNELS of BEHAVIOUR **CH**

8.1 ONLINE

→Searching online for symptoms and treatments.

→People may able to access the application in the browser.

8.2 OFFLINE

→Booking appointments in hospitals.

→A group of blood tests called liver function tests can be used to diagnose liver disease.