Project Title: Statistical Machine Learning Approaches To Liver Disease Prediction　　**Project Design Phase-I - Solution Fit Template**　　**Team ID: PNT2022TMID04104**

1. CUSTOMER SEGMENT(S)　CS

Who is your customer?
i.e. working parents of 0-5 y.o. kids

- Elderly aged people above 60 yrs
- Liver disease affected patients
- Hospitals
- Liver disease diagnosis centres

6. CUSTOMER CONSTRAINTS　CC

What constraints prevent your customers from taking action or limit their choices
of solutions? i.e. spending power, budget, no cash, network connection, available devices.

- Liver disease diagnosis tests are not affordable for all the patients
- Elderly people cannot visit hospitals frequently
- Patients have to wait for a long time to get their reports

5. AVAILABLE SOLUTIONS　AS

Which solutions are available to the customers when they face the problem

or need to get the job done? What have they tried in the past? What pros & cons do these solutions have? i.e. pen and paper is an alternative to digital notetaking

- Liver disease diagnosis test is available in hospitals and diagnosis centres
- But patients are not able to get their test results quickly, which sometimes leads to critical health condition

2. JOBS-TO-BE-DONE / PROBLEMS　J&P

Which jobs-to-be-done (or problems) do you address for your customers? There could be more than one; explore different sides.

- The solution should diagnose the disease as quickly as possible
- The solution should generate a detailed medical report for future reference

9. PROBLEM ROOT CAUSE　RC

What is the real reason that this problem exists? What is the back story behind the need to do this job? i.e. customers have to do it because of the change in regulations.

- Early detection of liver disease can be beneficial in the treatment of the disease
- People are scared to go to hospitals, or are not sure when to go to the hospital, because they do not understand the possible severity of their disease

7. BEHAVIOUR　BE

What does your customer do to address the problem and get the job done?

i.e. directly related: find the right solar panel installer, calculate usage and benefits; indirectly associated: customers spend free time on volunteering work (i.e. Greenpeace)

- Patients should consult the doctor if they have any symptoms of Liver disease
- Patients want to follow liver disease diagnosis test on a monthly basis as per doctor's consultancy

3. TRIGGERS — TR

What triggers customers to act? i.e. seeing their neighbour installing solar panels, reading about a more efficient solution in the news.

- Knowing about the impacts of liver disease through neighbours or relatives

- Understanding the severity of liver disease at later stage

4. EMOTIONS: BEFORE / AFTER — EM

How do customers feel when they face a problem or a job and afterwards?i.e. lost, insecure > confident, in control - use it in your communication strategy & design.

- Elderly people cannot visit hospitals frequently (Before finding the solution)

- No necessity to visit hospitals frequently and results can be generated instantaneously (After finding the solution)

10. YOUR SOLUTION — SL

If you are working on an existing business, write down your current solution first, fill in the canvas, and check how much it fits reality.

If you are working on a new business proposition, then keep it blank until you fill in the canvas and come up with a solution that fits within customer limitations, solves a problem and matches customer behaviour.

- The solution should automatically differentiate healthy and diseased patients just using the data

- The solution should give basic recommendations to the patients

- The solution should generate the report for the patients for future use

- The solution should include the features for the early detection of other diseases such as kidney disease prediction and diabetes prediction

8. CHANNELS of BEHAVIOUR — CH

8.1 ONLINE

What kind of actions do customers take online? Extract online channels from #7

8.2 OFFLINE

What kind of actions do customers take offline? Extract offline channels from #7 and use them for customer development.

- Patients need to find the symptoms of liver disease using online websites

- Patients want to consult the doctor and should follow diagnosis test to predict the liver disease and its severity

- If the liver disease was predicted, patients should act according to doctor's advice