Project Title: Early Detection of chronic kidney disease using Machine Learning **Project Design Phase-I - Solution Fit** **Team ID:** PNT2022TMID01511

1. CUSTOMER SEGMENT(S) CS

Who is your customer?

General people who might or might not be prone to chronic kidney disease , especially people affected by kidney related disease having mild symptoms like high blood pressure, unusual fatigue and kidney failure.

6. CUSTOMER CONSTRAINTS CC

What constraints prevent your customers from taking action or limit their choices of solutions?

Our solution is completely online, So old people with no online knowledge should be depend on someone who have knowledge about new technologies, to help them to take a test.

5. AVAILABLE SOLUTIONS AS

Which solutions are available to the customers when they face the problem to get the job done?

Diagnosis of chronic kidney disease done manually by doctors and lab staff using a variety of test findings.
And also by doing Dialysis or kidney transplantation for the affected person will be an solution to overcome.

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

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.

As the first step, collect the data that causes chronic kidney disease from the report and then develop Machine learning model which can predict the presence or absence of chronic kidney disease.At last we have to design the interactive userinterface for the communication purpose.

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?

Expensive diagnostic procedures, human mistake in manual diagnosis leads to inaccurate result and time taking to evaluate the results will be the root cause of the problem.

7. BEHAVIOUR BE

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

The system will be very helpful and free for the user to predict the disease, result obtained from the test of patient will be considered as the input for the created systems frontend, based on this machine learning model will predict for the future.

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

Identify strong TR & EM

3. TRIGGERS TR

What triggers customers to act?

Test findings that are costly and imprecise, which delay down diagnosis of disease.

4. EMOTIONS: BEFORE / AFTER EM

How do customers feel when they face a problem or a job and afterwards?

BEFORE: Disappointed, depressed and uncomfortable.

AFTER: Positivity,peace and self-assurance.

10. YOUR SOLUTION SL

A machine learning model integrated with user interface that uses test data to diagnosis chronic kidney disease in its early stages correctly and also to prevent manual mistakes in diagnosis.It also helps us to predict faster and accurately and also reduces the time and the usage of cost for test drastically.Not only that it also helps to take the treatment at right time.

8. CHANNELS of BEHAVIOUR CH

8.1 ONLINE

What kind of actions do customers take online?

By using the machine learning model for prediction of the chronic kidney disease which is integrated with userinterface, the details of the patient report should be given as the input in the app for the effective prediction through online.

8.2 OFFLINE

What kind of actions do customers take offline?

For the medical examination purpose the patient has to visit the hospital or laboratory for the test report which contain the details needed for the prediction.

Identify strong TR & EM