TITLE: EARLY DETECTION OF CHRONIC KIDNEY DISEASE	PROJECT DI SIGN PHASE 1-SOLUTION FIT TEMI ATE	TEAM ID: PNT2022TMID48762

Define CS, fit into CC

1. CUSTOMER SEGMENT(S)

CS

A Users of this application are patients who can be a normal person or Doctors or Medical professionals who want to know whether they are prone to chronic kidney disease.

6. CUSTOMER CONSTRAINTS

CC

- Expenses in treating chronic kidney disease
- Not having enough time to visit doctor and get their advice and proper treatment
- Doctors may not be available

5. AVAILABLE SOLUTIONS

AS

- Urine test
- Blood test: serum creatine test
- Blood urea nitrogen test
- Kidney ultrasound
- Kidney biopsy
- Blood test: eGFR

Explore AS, differentiate

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

2. JOBS-TO-BE-DONE / PROBLEMS

J&P

- Carelessness of a user in application while entering patients test results.
- User wrongly manipulating the patient's data in application due to insufficient knowledge or improper training.
- The jobs to be done are:
  - Collect the dataset
  - Preprocess the dataset
  - Build the machine learning model
  - Train the model
  - Test the model
  - Improve performance

9. PROBLEM ROOT CAUSE

RC

- Diabetes
- Prolonged obstruction of urinary tract
- Not drinking enough water
- Drinking alcohol un excess
- High blood pressure

7. BEHAVIOUR

BE

The behaviours of this solution are:

- User Friendly Interface.
- Accurate results without delay.
- Available 24/7
- Automatic detection of invalid input.

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

3. TRIGGERS

- As there wasn't any online application for detecting kidney disease
- Increase deaths due to later detection
- To start the diagnosis of the patient at the early stage.
- Early detection leads to a less painful treatment of a person rather having a painful treatment in case of very late detection.

4. EMOTIONS: BEFORE / AFTER

BEFORE:

Had to undergo different tests to identify whether they have chronic kidney disease and at sometimes the test results are provided too late.

AFTER:

Accurate results are provided and also the user doesn't have to wait for a long time.

10. YOUR SOLUTION

A system that provides results and prediction whether or not a person has chronic kidney disease. The user feeds in the necessary data required and system outputs the possibility of the person having the disease or not.

8.CHANNELS OF BEHAVIOUR

ONLINE:

As Patients use and once, they are satisfied with the accuracy of application they share their experience, and other patients are introduced to it. So that individuals will become aware of this application.

OFFLINE:

The system has high scalability and reliability and can be accessed through browsers like Chrome, Safari, Firefox, etc.