Project Design Phase-II
Solution Requirements (Functional & Non-functional)

Date	08 October 2022
Team ID	PNT2022TMID42291
Project Name	Project – Early Detection of Chronic Kidney Disease
Maximum Marks	4 Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	Home Page (Login Page)	• Introduction page of the website. • Symptoms and steps to cure will be displayed. • If the user already exists ask to **login** or else redirect to **Sign Up.**
FR-2	User Sign-Up Page	The user had to enter the username, phone number, andpassword.
FR-3	User Verification	After getting the phone number the OTP will be sent via SMS and it will be verified.
FR-4	Dataset Collection	Collect the data set related to Chronic Kidney Disease and process the data.
FR-5	Training the Model	By using the processed data the model will be trained again and again by using backpropagation techniques.
FR-6	Testing the Model	By using 20% of the dataset the model will be tested.
FR-7	Prediction	By using the data collected from the tested model the result is predicted.

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	Creating a machine learning model that uses the attributes of medical tests taken for different purposes to detect chronic kidney disease at an early stage.
NFR-2	**Security**	The reports are maintained confidentially to the customer.
NFR-3	**Reliability**	The model will identify and detect kidney disease earlier, so more clients will approach us and it results in how the model being more reliable to the customers.
NFR-4	**Performance**	By using DNN, we can predict chronic kidney disease with more than 95% of accuracy. In the DNN we have more hidden layers and hence its accuracy

		also high.
NFR-5	**Availability**	It is used a website(UI) and trained model to predict it will work at any time.
NFR-6	**Scalability**	This model can be expanded to include more attributes for more accurate detection. Training the model with even more attributes will increase the efficiency further.