Project Design Phase-I
Proposed Solution

Date	19 September 2022
Team ID	PNT2022TMID16583
Project Name	Early Detection of Chronic Kidney Disease Using Machine Learning
Maximum Marks	2 Marks

Proposed Solution :

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Detection of Kidney Disease at An Early Stage
2.	Idea / Solution description	The feasibility and importance of these ideas are evaluated using the brainstorming and idea prioritising template in mural. All those are: 1. Examine urine pus cells, anaemia, urea, edema, packed cell volume, and diabetes. If it is higher than the cutoff then mention CKD. 2. Regular blood tests for Glomerular Filtration Rate (GFR) and Creatinine For the standard techniques of early detection and avoidance of chronic kidney disease, all the suggestions above are to be followed. Analyze each of them separately. It is possible to check the anaemia, urea, packed cell volume, edoema in the leg, diabetes, and urine pus cells of many people, roughly 1000 people, and then build an excel sheet to determine whether or not they have chronic kidney disease. This excel spreadsheet can then be used to train and test an AI model. Later, the model can determine whether or not chronic renal disease is present if only these parameters are fed into it. One thousand people's blood samples for creatinine and glomerular filtration rate (GFR) can be examined to determine whether they have chronic kidney disease. Based on the data, an AI model can be created, trained, and tested to forecast chronic kidney disease. A ML model can be built to analyze these data and further used to predict the kidney disease from it.

3.	Novelty / Uniqueness	According to numerous specialists, the best conventional strategy is to evaluate multiple blood parameters and spot chronic kidney disease at an early stage. User is able to identify Chronic Kidney Disease in time.
4.	Social Impact / Customer Satisfaction	Early detection of CKD which reduce fatalities related to this disease and it also help in facilitation of appropriate dosing of medications and allow timely preparation for kidney replacement, which may improve outcome.
5.	Business Model (Revenue Model)	Capable of bringing revenue from directly clients. Can collaborate with health care sector and generate revenue from their customers.
6.	Scalability of the Solution	ML models are easily resized and updated. The same machine learning model can therefore be used to identify other fatal diseases when fed with different sets of data.