Project Design Phase-I
Proposed Solution Template

Date	26 September 2022
Team ID	PNT2022TMID40348
Project Name	Early detection of Chronic kidney disease using Machine Learning
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in proposed solution template.

S/No	Parameter	Description
1.	Problem Statement (Problem to be solved)	• Chronic kidney disease prediction is one of the most important issues in healthcare analytics. • 10% of the population worldwide is affected by chronic kidney disease (CKD),and millions die each year because they do not have access to affordable treatment. • The most Interesting and challenging tasks in day-to-day life is prediction in medical field. • Chronic kidney Disease can be cured, if treated in the early stages.
2.	Idea / Solution description	• The idea is detecting the presence of kidney disease through machine learning based classification modelling, by processing the patient's ECG signal • Recent studies and ongoing researches have showed that patients undergoing kidney problems start developing cardiac problems-scientifically known as the Cardio Renal Syndrome (CRS). • Since cardio-vascular diseases and the chronic kidney disease is inter-related, this model can also be used for patients undergoing cardio-vascular problems to determine wether their kidneys have been effected or not. • The solution is we develop a app that asks basic questions about the user's kidney function and asks to upload his ECG report.

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		• From those information, the model could successfully classify the users from being healthy or a kidney patient.
3.	Novelty / Uniqueness	• Compare to other kidney function test, the ECG test is of low cost and very accurate. • Ours would be the first app to detect Chronic kidney disease using the ECG report uploaded by the user.
4.	Social Impact / Customer Satisfaction	• The primary advantage of this model is the fact that it provides a safe non-invasive way for patients to determine the state of their kidneys in a simple way.
5.	Business Model (Revenue Model)	• Can collaborate with health care sectors and generate revenue from their customers. • Can generate revenue through direct customers.
6.	Scalability of the Solution	• The design will be portable and scalable Chronic kidney Disease detecting phenotype to facilitate early disease recognition.