

Project Design Phase-I
Proposed Solution Template

Date	23 September 2022
Team ID	PNT2022TMID10811
Project Name	Project - 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)	<ul style="list-style-type: none">● One of the most greatest problem in healthcare analytic is the prediction of chronic kidney disease.● Chronic kidney disease (CKD) affects 10% of people globally, and millions of people pass away each year because they cannot afford treatment.● The most interesting and difficult activities in daily life are those involving medical judgment.● If chronic kidney disease is addressed early on, it could potentially be cured.
2.	Idea / Solution description	<ul style="list-style-type: none">● The concept is to process the patient's ECG signal and use machine learning-based classification modelling to identify the presence of renal disease.● Recent studies and current research have demonstrated that people with kidney disorders often also experience cardiac issues, which are collectively referred to as the Cardio Renal Syndrome (CRS).● Since chronic kidney illness and cardio-vascular diseases are related, people with cardio-vascular issues can also utilize this model to identify whether or not their kidneys have been affected.● The approach is to create an app that requests the user submit his ECG data and asks a series of basic questions regarding his kidney health.
3.	Novelty / Uniqueness	<ul style="list-style-type: none">● The ECG test is inexpensive and extremely accurate compared to other kidney function tests.● Our app would be the first to use a user-uploaded ECG record to detect chronic kidney disease.

4.	Social Impact / Customer Satisfaction	<ul style="list-style-type: none"> ● The main benefit of this model is that it gives patients an easy, safe, non-invasive way to assess the health of their kidneys.
5.	Business Model (Revenue Model)	<ul style="list-style-type: none"> ● can work with the healthcare industry to bring in money from their clients. ● can bring in money from direct clients.
6.	Scalability of the Solution	<ul style="list-style-type: none"> ● The structure will be transportable and expandable. Detecting the phenotype of chronic renal disease to aid in early illness detection.