Project Design Phase-I
Proposed Solution Template

Date	19 September 2022
Team ID	PNT2022TMID01656
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)	• Chronic Kidney Disease (CKD) is also known as Kidney Failure. Chronic Kidney Disease is a condition in which the kidneys stop functioning gradually and leads to various symptoms. About 8 to 10 percent of the world's population is suffering from CKD. • It is the 11th most deadly cause of global morality with 1.2 million deaths each year. Nowadays, even younger patients are getting affected by chronic kidney disease. If it is not treated or managed properly, then kidneys stop working completely. • Early detection of CKD in its initial stages can help the patient get effective treatment and then prohibit the progression to ESRD. The challenging effort in recognizing the many disorders associated with CKD at an early stage so that the disease might be prevented. • This study provides a unique Machine learning model for detecting and predicting CKD in its early stages. The goal of the study is to build a deep neural network and compare it to the performance of other modern machine learning approaches. So, the objective of this research is to provide an effective

		model to predict the CKD by least number of predictors.
2.	Idea / Solution description	• The overall proposed idea is to detect the chronic kidney disease as early as possible. • we provided machine training methods for anticipating chronic renal disease with clinical information. • This idea can be implemented and could be presented to the hospitals. • Collecting the dataset for training the disease prediction model. • Testing the disease prediction model.
3.	Novelty / Uniqueness	• This work examines the ability to detect CKD using machine learning algorithms while considering the least number of tests. • In order to find the best accuracy among the different classifier for detecting the disease earlier.
4.	Social Impact / Customer Satisfaction	• Detecting the diseases early by this system and diagnosing the disease would become much easier. • This helps the patient to avoid getting the worst stage of this CKD.
5.	Business Model (Revenue Model)	• The approach can be put into use for early-stage CKD prediction in a way that is both effective and affordable, which will be beneficial for developing and underdeveloped nations. • Diverse initiatives have been made to advance early therapy to stop the problem from turning into a chronic disease.
6.	Scalability of the Solution	• To early detection and treatment of disease, some of the bad analysis can be avoided. • This approach works best for finding this disease early.