Project Design Phase-I
Proposed Solution Template

Date	10 October 2022
Team ID	PNT2022TMID51040
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 (CKD) is a major medical problem and can be cured if treated in the early stages. Every year, an increasing number of patients are diagnosed with late stages of renal disease. Chronic Kidney Disease is characterized by abnormal kidney function or a breakdown of renal function that progresses over months or years. Usually, people are not aware that medical tests we take for different purposes could contain valuable information concerning kidney diseases. Chronic kidney disease is often found during screening of persons who are known to be at risk for kidney issues, such as those with high blood pressure or diabetes, and those with a blood family who has chronic kidney disease (CKD). Consequently, attributes of various medical tests are investigated to distinguish which attributes may contain helpful information about the disease. The information says that it helps us to measure the severity of the problem and we make use of such information to build a machine learning model that predicts Chronic Kidney Disease
2.	Idea / Solution description	The algorithms used to detect the Chronic Kidney Disease are Naive Bayes algorithm, Decision tree , Random Forest and Support vector algorithm.
3.	Novelty / Uniqueness	In early days, Chronic kidney disease can be diagnosed with blood and urine test**.** Now the solution is find with help of Machine Learning.

4.	Social Impact / Customer Satisfaction	Approximately 700 million people worldwide live with chronic kidney disease (CKD) – that's equivalent to the population of Europe. It is a silent disease in its early stages, contributing to the unacceptably low diagnosis rates. If left untreated, the majority of patients with CKD will die from cardiovascular disease before kidney failure which requires dialysis or transplant. When CKD progresses to kidney failure, it results in significant burden to healthcare expenditures. Many developed countries spend 2-3% of their annual healthcare budget on the treatment of kidney failure, even though those receiving such treatment represent less than 0.1% of the global population. In this, advanced Machine Learning(ML) algorithms are developed to detect the chronic kidney disease earlier .
5.	Business Model (Revenue Model)	With a global shortage of health care professionals specialising in CKD care , empowering primary care physicians and developing effective multidisciplinary teams to play a greater role in early detection and management can help reduce the burden on hospitals and health systems.
6.	Scalability of the Solution	Scalability of this solution can handle any amount of data and perform many computations in a cost effective and time saving to instantly serve millions of patients at global location.