Project Design Phase-I
Proposed Solution Template

Date	15-10-2022
Team ID	PNT2022TMID37140
Project Name	**Early Detection of Chronic Kidney Disease using Machine Learning**

PROPOSED SOLUTION :

S NO	PARAMETER	DESCRIPTION
1.	Problem Statement (Problem to be solved)	• Chronic kidney disease prediction using machine learning techniques. Our model predicts the kidney disease using diabeties and blood pressure levels.
2.	Idea / Solution description	• Chronic kidney disease prediction model using the principal component analysis followed by classification and regression algorithms. • Firstly,we collect the patients medical dataset from the hospital. • Secondly, the principal component analysis (PCA) is applied to the dataset to identify critical parameters. • Thirdly, to predict the CKD, different regression algorithms are used to the PCA output. • Finally, the classification and regression algorithms is utilized to classify the kidney status.
3.	Novelty / Uniqueness	• In this prediction, the main uniqueness is utilization of PCA and algorithms classification and regression.

4.	Social Impact / Customer Satisfaction	• By predicting the kidney disease in early stages can decrease the death rate and increase the possibilities of curing rate. • Psychsocial factors including depression,anxiety and lower social support are common in patients with chronic kidney disease(CKD). • Conducting camp and educating people through public services, promote this more.
5.	Business Model (Revenue Model)	For Analyzing the metrics of each datasets a charge of Rs 150 will be collected.
6.	Scalability of the Solution	• The solution is highly scalable as we use Machine learning technique . • Even with the large amount of datasets it correctly predicts the disease with high accuracy.