Project Design Phase-I
Proposed Solution Template

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Project Name	Early Detection of Chronic Kidney Disease using Machine Learning

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. Usually, people are not aware that medical tests we take for different purposes could contain valuable information concerning kidney diseases. 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	● Data is collected and made in a common csv format.This data is then loaded, preprocessed inorder to remove null values, segregate the dependent and independent variables, encode the needed columns, create analysis maps, split the data into training and testing data, choose the model which can suit this problem, train the model with the training data, test the accuracy with the test data against predicted data and save the model to integrate it with a web app. ● A web app is built which renders a form for the user to enter the attributes.The saved model is loaded and the entered values are fed into the loaded model and the predicted results are returned to the user. ● The model is then deployed into the cloud for the web app to request from the deployed model.
3.	Novelty / Uniqueness	Doctor must manually examine and suggest medical diagnosis in which the symptoms might vary from person to person so suggesting medicine is also a challenge. So hence the disease examination varies at different

		instances of the medical operations. Here by using machine learning methods, the problem can be addressed with very less error rate. The dataset of Kidney disease is used as input. Also, our proposed system provides accurate results by a good accuracy percentage.We propose a web application for the medical team as well as normal users.This can be used direct by medical team for analyzing and offering the solutions at much positive scaling time.
4.	Social Impact / Customer Satisfaction	● Personalize the UI experience ● Improves accurate result as expected ● Cloud deployed Machine Learning Model ● Accurate prediction at good time complexity.
5.	Business Model (Revenue Model)	● Solutions prospects of improvement ● Suits for better saving of involvements ● Economical Development ● Easy interface
6.	Scalability of the Solution	Since the machine learning model is saved and deployed in a cloud environment the app is fast to accept user requests, predict the result and return the response to the users.The web app is deployed in a auto scaling environment.