**Project Design Phase-I**

**Proposed Solution Template**

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| Date |  |
| Team ID | PNT2022TMID37140 |
| Project Name | **Early Detection of Chronic Kidney Disease using Machine Learning** |

**PROPOSED SOLUTION :**

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| **S NO** | **PARAMETER** | **DESCRIPTION** |
|  | 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. |
|  | Idea / Solution description | * Chronic kidney disease prediction model using the principal component analysis followed by Support vector Machine(SVM) classification. * 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 support vector machine(SVM) is utilized to classify the kidney status. |
|  | Novelty / Uniqueness | * In this prediction, the main uniqueness is utilization of PCA and Support Vector Machine(SVM) classification. |
|  | 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. |
|  | Business Model (Revenue Model) | For Analyzing the metrics of each datasets a charge of Rs 150 will be collected. |
|  | 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. |