**Project Design Phase-I Proposed Solution Template**

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| Date | 13 october 2022 |
| Team ID | PNT2022TMID01412 |
| 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.

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| **S.No.** | **Parameter** | **Description** |
| 1. | Problem Statement (Problem to be solved) | Patients who suffer from chronic kidney diseases need a way to control its progression to an advanced state with early detection and appropriate treatment. Machine learning has advanced to the point that it is now possible to look through patient medical information and identify chronic kidney disease in its early stages. |
| 2. | Idea / Solution description | Since certain data are missing, the initial step is to perform pre-processing by cleaning the dataset, along with scaling and normalisation of values. The next step is to use dimensionality reduction to identify the key features in the dataset and to remove any irrelevant ones. To accomplish early detection of chronic kidney disease utilising the indicated key traits, a decision tree model must be fitted. |
| 3. | Novelty / Uniqueness | * An indicator of how well the kidneys is working is the amount of a waste product called creatinine in the blood. By examining this data, early kidney disease can be identified by detecting deviations from the norm. * In the case of healthcare management products, it is especially important to have a UI that is very user-friendly and open to everyone. |
| 4. | Social Impact / Customer Satisfaction | The primary goal of this application is early prediction, and appropriate treatments may be able to prevent or delay the disease's progression to an advanced state. |
| 5. | Business Model (Revenue Model) | * The suggested strategy has the potential to generate income from |

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|  |  | direct patients as payment for the development of immediate outcomes.   * It can also collaborate with the healthcare sector to generate revenue from patients who come in for kidney disease diagnosis. |