**Project Design Phase-I**

**Proposed Solution Template**

|  |  |
| --- | --- |
| Date | 19 September 2022 |
| Team ID | PNT2022TMID12919 |
| Project Name | Project – Statistical Machine learning approaches to liver disease prediction |
| Maximum Marks | 2 Marks |

**Proposed Solution Template:**

Project team shall fill the following information in proposed solution template.

|  |  |  |
| --- | --- | --- |
| **S.No.** | **Parameter** | **Description** |
|  | Problem Statement (Problem to be solved) | Liver diseases avert the normal function of the liver. Early prediction of liver disease using classification algorithms is an efficacious task that can help the doctors to diagnose the disease within a short duration of time. The main objective of this project is to analyse the parameters of various classification algorithms and compare their predictive accuracies so as to find out the best classifier for determining the liver disease. |
|  | Idea / Solution description | Data from liver patients such as liver enzymes, proteins, age and gender are examined to predict the likeliness of liver disease. Then building a model by applying various machine learning algorithms, and integrate it to flask -based web application. |
|  | Novelty / Uniqueness | This model takes in the patient’s symptoms as inputs and compares it with the symptoms exhibited by others with a liver disease. It also dynamically alters the algorithm based on the predicted value and actual output value. |
|  | Social Impact / Customer Satisfaction | This model helps in early prediction of liver disease by doctors. User can predict the disease by entering parameters in the web application. Early prediction of the disease helps save the life. |
|  | Business Model (Revenue Model) | Medical experts can use the model to predict the likelihood of the disease without the use of other complicated medical tests, thus reducing the time for diagnosis. |
|  | Scalability of the Solution | Picking the right framework increases the scalability of the model. Data must be trained properly so that it produces error free results. Reducing the precision will right away lead to reduced memory requirement. |