**Project Design Phase-II**

**Solution Requirements (Functional & Non-functional)**

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| Date | 11 October 2022 |
| Team ID | PNT2022TMID32447 |
| Project Name | Project – Statistical Machine Learning Approaches to Liver Disease Prediction |
| Maximum Marks | 4 Marks |

**Functional Requirements:**

Following are the functional requirements of the proposed solution.

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| **FR No.** | **Functional Requirement (Epic)** | **Sub Requirement (Story / Sub-Task)** |
| FR-1 | Patient with symptoms of liver disease | Patient dataset such as Total Bilirubin, Direct Bilirubin,  Total Proteins, Albumin etc. |
| FR-2 | Predicting the disease using algorithms | Machine learning |
| FR-3 | Pre-processing the Data set of patient. | MPCA |
| FR-4 | Classification of algorithm | KNN ,SVM, ANN, Navis bayes |
| FR-5 | Building and training the system | In this phase, we split the dataset into training and test dataset , and then trained the models using training dataset |
| FR- 6 | Testing the model | In this phase, we tested the accuracy of the models with the test dataset that was formed in previous phase and the most accurate model is figured out. |

**Non-functional Requirements:**

Following are the non-functional requirements of the proposed solution.

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| **FR No.** | **Non-Functional Requirement** | **Description** |
| NFR-1 | **Usability** | We can predict the liver disease easier and also in an earlier stage. It is an cost effective, since it is useful to all types of people. |
| NFR-2 | **Security** | Predicting the liver disease earlier helps the people to get rid of disease in an earlier stage and it saves the life of people. |
| NFR-3 | **Reliability** | This method is more reliable as its provide high performance and scalability. |
| NFR-4 | **Performance** | It gives accuracy of more than 90% .So its performance rate is high. |
| NFR-5 | **Availability** | By having few basic data set of people we can predict the disease. |
| NFR-6 | **Scalability** | It has more efficiency in detecting liver disease prediction than any other models. |