

Project Design Phase-II
Solution Requirements (Functional & Non-functional)

Date	03 October 2022
Team ID	PNT2022TMID15966
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.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form Registration through Gmail Registration through LinkedIn
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	User verification	Verification through CAPTCHA Verification through I am not a robot.
FR-4	User Authentication	Recognition of correct person Resending the code in case of forgot password.
FR-5	User validation	Reconfirming the new password Sending a two digit number in (Google account) your old devices, so that you can enter a new device by entering the two-digit number.
FR-6	User Submission	Submission through Google form Submission through Email.

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	The liver disease prediction system predicts the likelihood of patients getting liver disease. It enables significant knowledge, e.g., relationships between medical

		factors related to liver disease and patterns, to be established.
NFR-2	Security	When we predict health analysis, we provide a correct accuracy and prediction based on this prediction only the seriousness of diseases will be predicted. So, the taken data will contains at least some of true values.
NFR-3	Reliability	Support vector machine (SVM), Random Forest algorithm and KNN algorithm have been employed for developing liver disease risk prediction model and obtained the accuracy as 76%, 70.9% and 64.9% respectively
NFR-4	Performance	This study found that using a liver disease dataset collected from Kaggle three-classification based decision tree along with accuracy, sensitivity, and specificity.
NFR-5	Availability	Machine Learning can play an essential role in predicting, liver diseases and more. Such information, if predicted well in advance, can provide important insights to doctors who can then adapt their diagnosis and treatment per patient basis.
NFR-6	Scalability	It is depended on the model performance. If the accuracy will not satisfied, we will improve the accuracy by boosting method. The high accuracy can achieved through removing duplicates and performing data Cleaning.