Project Design Phase - II

Solution Requirements (Functional & Non-functional)

Date	03 October 2022
Team ID	PNT2022TMID12773
Project Name	Detecting Parkinson’s Disease using Machine Learning
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/ Patient Registration**	Registration through Form Registration through Gmail Registration through Hospital membership Registration through Mobile number
FR-2	**User Confirmation**	Confirmation via Email Confirmation via OTP
FR-3	**Authentication**	Authentication through Password and Patient ID (if registered with any Hospital)
FR-4	**External Interfaces**	Web application/ Android mobile application for a user-friendly GUI.
FR-5	**Medical requirements**	The model only provides a prediction of the diagnosis based on the uploaded images, however a further medical examination would be necessary and consulting a physician is advised in case of positive diagnosis.
FR-6	**User preferences**	The user can prefer to use the prediction model multiple times with different input data. They can locate relevant websites and articles to verify the prediction's accuracy. They can choose not to rely on the prediction and further consult a physician to confirm the diagnosis provided by the model and opt for further treatment, if any.

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	The user can easily interact with the model using the Simple User Interface to upload their drawing image and get the diagnosis prediction.
NFR-2	**Security**	The encrypted user details and data collected would be stored in a highly secure database.
NFR-3	**Reliability**	The Machine Learning model would have a higher accuracy to increase the reliability of the solution. Underfitting and overfitting of the model would be prevented.
NFR-4	**Performance**	The application developed would require minimum processing time and faster response, thus providing a satisfactory user experience.
NFR-5	**Availability**	The application would be easily available to all sectors of the population and can be accessed from anywhere.
NFR-6	**Scalability**	As many users use the application, the collected data can be used to further train the model. The model would be scalable to train with a larger dataset and provide more accurate prediction.