Project Design Phase-II

Solution Requirements (Functional & Non-functional)

Date	15 October 2022
Team ID	PNT2022TMID04178
Project Name	Deep Learning Fundus Image Analysis for Early Detection of Diabetic Retinopathy.
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	The user registration process includes the creation of account through either email id or phone number with new password through the website.
FR - 2	User Login	The existing user can directly login to the website by giving the Login credentials.
FR - 3	Admin Login	The admin can login to the website where the admin can find the analysis of the predicted data.
FR - 4	Upload Image	The user can upload the retinal image of eye in the dropdown menu from various assets like (drop box, gallery etc.,)

FR - 5	Data collection	Collecting the dataset related to the DR fromsource to Train the Model.
FR - 6	Creating Model	Creation of the model and Train the model using dataset for prediction.
FR - 7	Test the Model	Test the model for prediction.
FR - 8	Diagnosis	Diagnosis analysis of the application and carry on with the treatments.

Non-functional Requirements:

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

NFR No.	Non-Functional Requirement	Description
NFR - 1	**Usability**	The application can be easily accessible by any type of individuals, the aged individual and affected by DR can also use this tool for Diagnosis.
NFR - 2	**Security**	Data security is important to store the customer data in the secured manner. The information should not be leaked outside.

NFR - 3	**Reliability**	Should provide novel results for five different screening and clinical grading systems for diabetic retinopathy including state-of-the-art results for accurately classifying images according to clinical five-grade diabetic retinopathy.
NFR - 4	**Performance**	The ability of Deep Learning is to perform pattern recognition by creating complex relationships based on input data and then comparing it with performance standards is a big step also to diagnosis in short time.
NFR - 5	**Availability**	Healthcare affordability, standards, and accessibility is made much more easier using this platform and the application will be available to all kinds of users.
NFR - 6	**Scalability**	The application must hold stable even when multiple users are using it at the same times.