Project Design Phase-II

Solution Requirements (Functional & Non-functional)

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| Date | 16 October 2022 |
| Team ID | PNT2022TMID48925 |
| 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.

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| **FR No.** | **Functional Requirement (Epic)** | **Sub Requirement (Story / Sub-Task)** |
| FR-1 | To get user image and to maintain a user or patient profile | Able to store user data and update it and protect it easily.User should be able to Upload images easily |
| FR-2 | Image analysis | The image must be analysed and Incase of poor image quality a request for re upload or Try Upscaling the  image |
| FR-3 | Diagnosis of Diabetic Retinopathy | The Diagnostic must be accurate and the training model must have an accuracy over 90%(greater than current manual method) |
| FR-4 | Report And Suggestions | The report must be simple for user to understand and  should provide the user to send the report to medicinal professional without much hassle |
| FR-5 | Evaluation | The results must be analysed and user must be tracked  until proper treatment is given(User should have the ability to deny the tracking and suggestion) |

# 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** | Easy to use and easy to navigate web service |
| NFR-2 | **Security** | Must protect the user data |
| NFR-3 | **Reliability** | Must be able to produce accurate results with near to zero error margin |
| NFR-4 | **Performance** | Must be able to analyse and send report in Hour or  less |
| NFR-5 | **Availability** | Must be available widely through the use of cloud so no stress is on local machines and easy access from remote screening centers |
| NFR-6 | **Scalability** | The core system needs to be easily modifiable and  remove error and other addons that increase accuracy or time reduction |