**Project Design Phase-II**

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

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|---|---|
| Date | 03 October 2022 |
| Team ID | PNT2022TMID17540 |
| 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 | Identify and selecting dataset | It is necessary to select the appropriate dataset to enhance the model's performance. |
| FR-2 | Training | It is required to import the libraries needed for the training of the model. |
| FR-3 | Diagnosis | The training should ensure proper diagnosis and make sure to identify the true and false of the medical condition [Diabetic Retinopathy]. |
| FR-4 | Analysis | Based on the training the model should analyse the medical condition [DR] in order to predict/detect the disease accurately. |
| FR-5 | Testing | The trained model is tested with different data to ensure it has trained well to predict/detect the medical condition [DR]. |
| FR-6 | Reporting | The result of the experiment gives the medical report of the disease [DR] so that the patient can understand the level of the disease. |
| FR-7 | Treatment | The testing of the model gives us the level of the medical condition so that we can go for the required treatment. |

**Non-functional Requirements:**

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

| FR No. | Non-Functional Requirement | Description |
|---|---|---|
| NFR-1 | **Usability** | User with basic understanding of the medical condition and computer knowledge can operate the system. |
| NFR-2 | **Reliability** | There is a chance of hardware failure or false positives when the testing data is more of different than the training dataset. |
| NFR-3 | **Performance** | The performance of the model is meant to give speedy results for the patients. |
| NFR-4 | **Availability** | The model is made to be available at anytime and anywhere. |
| NFR-5 | **Scalability** | The scalability of the model can be enhanced with future technologies so that the performance of the model can be improved and might affect the reliability when the data given for testing is increased. |