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

Date	15 October2022
Team ID	PNT2022TMID36587
Project Name	Deep Learning Fundus Image Analysis for Early Detection of Diabetic Retinopathy
Maximum Marks	4Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story/Sub-Task)
FR-1	Identifying the population eligible for screening	Determine the group to be screened based on best evidence and use registers to make sure people's details Are collected and up to date
FR-2	Invitation and information	Invite the full cohort for screening, supplying information tailored appropriately for different groups To enable informed choice to participate
FR-3	Testing	Conduct screening test(s) using agreed/recommended Methods
FR-4	Referral of screen positives and reporting of screen-negative results	Refer all screen-positive results to appropriate services and make sure screen negatives are reported to Individuals and they stay in the screening program.
FR-5	Diagnosis	Diagnose true cases and identify false positives
FR-6	Intervention/treatment/follow up	Intervene/treat cases appropriately; in some conditions, Surveillance or follow up will also be required
FR-7	Reporting of outcomes	Collect, analyze and report on outcomes to identify false negatives and improve effectiveness and cost-effectiveness of screening program.

Non- Functional Requirements:

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

FR No.	Non-FunctionalRequirement	Description
NFR-1	**Usability**	Provides novel results for five different screeningandclinicalgradingsystemsfordiabeticretinopathyincluding state-of-the-art results for accurately classifying images according to clinical five -grade Diabetic retinopathy.
NFR-2	**Security**	Deep Learning using AI can be more precise around sensitive organs and tissues, reduce blood loss, risk Of infection, and pain during detection/screening.
NFR-3	**Reliability**	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.
NFR-4	**Performance**	AI in simple words means to accomplish a task mainly by a computer or a robot, with minimal involvement of human beings. Standard templates for drawing findings of the retina may improve accuracy of recording of results.
NFR-5	**Availability**	Health care affordability, quality, and accessibility Can be amplified using this technology.
NFR-6	**Scalability**	It is possible to build on existing systems and take a Stepwise approach to improving the effectiveness of current approaches so that high-quality systematic diabetic retinopathy screening becomes a universal Offer to all people with diabetes.