Project Design Phase -I
Proposed Solution

Date	8 November 2023
Team ID	PNT2023TMID592236
Project Name	Project - Fundus Image Analysis for Early Detection of Diabetic Retinopathy
Maximum Marks	4 Marks

Proposed Solution:

S. No.	Parameter	Description
1	Problem Statement (Problem to be solved)	How do we develop an image-based DiabeticRetinopathy detection model with severity assessment and comprehensive reports
2	Idea / Solution description	Implementing a holistic healthcare solution for diabetic retinopathy detection and assessment. Ourplatform will house an image-based severity detection model. Users can easily submit retinal images and medical history for personalized diagnosis and care plans. The system will producecomprehensive reports, suggest treatments, and support telemedicine, ensuring improved access tocare. We are dedicated to promoting researchcollaboration for ongoing advancements in diabeticretinopathy assessment..
3	Novelty / Uniqueness	Our project stands out with its multifaceted approach. It offers not only accurate diabetic retinopathy detection, but also delivers comprehensive reportingfor informed decision-making. Moreover, the platform provides tailored treatment recommendations, ensuring personalized care. The integration of consultation services further enhancesaccessibility to expert guidance, making our solutionuniquely comprehensive and impactful.

4	Social Impact / Customer Satisfaction	• The ability to predict diabetes levels accurately and provide early intervention can significantly reduce the risk of complications like diabetic retinopathy. • This preventive approach not only improves patient outcomes but also eases the burden on healthcare systems. • The comprehensive report with detailed information serves as an educational resource and the importance of early assessment . • Informed patients are more likely to engage in proactive self-care and potentially prevent vision loss.
5	Business Model (Revenue Model)	Our Business Model is as follows: • Value Added Services: In addition to our core diabetic retinopathy detection platform, we offer value-added services such as personalized health insights, regular progress reports, and access to educational resources, enhancing the overall user experience. • 7-Day Trial Followed by Subscription: Users can enjoy a complimentary 7-day trial period to explore the full range of features and benefits. Following the trial, the platform will be available on a subscription basis, providing uninterrupted access to our comprehensive assessment tools. • Awareness Campaigns in Eye Care Hospitals: We can conduct targeted awareness campaigns in eye care hospitals, collaborate with healthcare professionals to educate them about our platform's capabilities. This initiative aims to increase awareness and adoption among the medical community, ensuring more patients benefit from our solution.

6	Scalability of the Solution	Utilizing cloud technology enables seamless scaling of the platform with auto-scaling, load balancing, and efficient storage solutions. This ensures optimal performance, cost efficiency, and global accessibility for users. Additionally, cloud technology facilitates efficient data warehousing and pipeline management, ensuring robust storage, retrieval, and processing of retinal images and patient records.