

Project Design Phase - I
Proposed Solution Template

Date	29 September 2022
Team ID	IBM-Project-18407-1659684768
Project Name	Deep Learning Fundus Image Analysis for Early Detection of Diabetic Retinopathy
Maximum Marks	2 Marks

Proposed Solution Template :

S. No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Analyzing a fundus image can help identify diabetic retinal disease early. <ul style="list-style-type: none">Analyze the level of DRTo detect whether DR is present or not
2.	Idea / Solution description	<ul style="list-style-type: none">➤ The goal is to identify diabetic retinopathy from the fundus image dataset as soon as possible, allowing individuals to proceed with the necessary treatments and avoid temporary or permanent vision loss.➤ We will create a deep learning model (CNN) with high accuracy to detect DR and protect people at risk of losing their vision because there is no complete cure for this form of DR.
3.	Novelty / Uniqueness	On the basis of the level of DR performed during analysis, a class-based classifier will be provided. As part of the work, we'll also test out a transfer learning strategy that has the potential to be very successful and lead to improved performance.

4.	Social Impact / Customer Satisfaction	People who lose their vision could actually benefit from this and live. Early analysis and detection of DR is crucial for minimizing social impact because it can help patients keep their vision.
5.	Business Model (Revenue Model)	<ul style="list-style-type: none"> ▪ Doctors can analyze and identify DR using this model, which functions as a service model for public hospitals and a business model for private hospitals. ▪ Even exporting it to other nations who require it can work as a business strategy.
6.	Scalability of the Solution	There are increasingly more approaches to scale the solution so that the model is simple to combine with emerging technologies.