

Project Design Phase-I
Proposed Solution

Date	27 October 2023
Project Name	Deep Learning Model for Eye Disease Prediction
Maximum Marks	2 Marks

Proposed Solution:

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	The early detection and diagnosis of eye diseases is essential for preventing vision loss and blindness. However, traditional methods of eye disease diagnosis, such as eye exams and imaging tests, can be time-consuming and expensive. Deep learning models have the potential to automate and streamline the eye disease diagnosis process, making it more accessible and affordable for everyone.

2.	Idea / Solution description	To use data augmentation techniques to balance imbalanced datasets. This involves creating new images from existing images using techniques such as flipping, rotating, and cropping. By using transfer learning, this involves training a deep learning model on a large dataset of general images, such as ImageNet, and then fine-tuning the model on a smaller dataset of eye disease images. This approach can help to reduce the amount of data needed to train the model and improve the model's ability to learn the relevant features for eye disease prediction.
3.	Novelty / Uniqueness	It is able to predict multiple eye diseases from a single image. Primary care physicians could use the model to screen patients for eye diseases during routine visits. Telemedicine providers could use the model to provide eye exams to patients in remote areas. It is able to identify subtle signs of eye disease.
4.	Social Impact / Customer Satisfaction	Reduced burden on healthcare systems. Improved quality of life for people with eye diseases. Increased access to eye care for underserved populations. Empowering people to take control of their eye health. The model could help people to learn more about eye diseases and take steps to protect their vision. Creating new jobs and opportunities. The development and deployment of the model could create new jobs and opportunities for people in the healthcare and technology industries.

5.	Business Model (Revenue Model)	<p>The core business revolves around the development, licensing and consulting. The deep learning model for eye disease prediction has the potential to be a profitable business venture. The market for eye disease diagnostic tools and services is large and growing. The model is unique and has the potential to disrupt the existing market. By choosing the right business model, the company that developed the model can maximize its profits and make a positive social impact. The best business model for the deep learning model for eye disease prediction will depend on a number of factors, such as the target market, the company's resources, and the regulatory environment.</p>
6.	Scalability of the Solution	<p>The deep learning model for eye disease prediction described above is highly scalable. The model can be deployed on a variety of hardware platforms, including cloud servers, edge devices, and mobile devices. This makes the model accessible to a wide range of users, including healthcare providers, pharmaceutical companies, and individuals. The deep learning model for eye disease prediction is a highly scalable solution that can be deployed on a variety of hardware platforms and used by a wide range of users.</p>