Project Design Phase-I
Proposed Solution Template

Date	15 November 2023
Team ID	PNT2022TMID591573
Project Name	Project – Deep Learning model for Eye disease Prediction
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Develop a CNN model for early detection of eye diseases from retinal images. Classify images into categories like diabetic retinopathy and glaucoma. Ensure robustness across diverse demographics in the dataset. Provide interpretable insights for clinical applicability.
2.	Idea / Solution description	The proposed CNN model for eye disease prediction employs convolutional layers to capture local patterns in retinal images. Max pooling enhances computational efficiency, and two dense layers with ReLU activation capture higher-level features. The final layer produces a probability distribution for disease classes, enabling early detection. Trained on diverse data, the model aims to be robust across demographics, with interpretability for clinical application.
3.	Novelty / Uniqueness	The model's uniqueness lies in its integration of convolutional layers, max pooling, and dense layers with ReLU activation for comprehensive feature extraction. The use of a diverse dataset enhances generalization across demographics, while the softmax output ensures clear disease class probabilities, enabling early detection. Emphasizing interpretability, the model is well-suited for practical clinical applications in eye disease prediction.
4.	Social Impact / Customer Satisfaction	This model has a great social impact both socially. People can themselves diagonise the retinal diseases themselves.
5.	Business Model (Revenue Model)	This model can be used it many medical and health care industries. Can be helpful to doctors in Early detection of the retinal diseases.
6.	Scalability of the Solution	The scalability of the solution depends on computational resources, data volume, and the adaptability of the model architecture. Techniques like parallelization and optimization, along with seamless deployment, impact its practical scalability for widespread use in real-world healthcare settings. Maintenance and update ease further contribute to the solution's long-term scalability