**Project Design Phase-I**

**Proposed Solution Template**

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| Date | 19 September 2022 |
| Team ID | 609691 |
| Project Name | 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.

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| **S.No.** | **Parameter** | **Description** |
| 1. | Problem Statement (Problem to be solved) | A myriad of eye diseases, stemming from factors like genetics, aging, environment, or underlying health issues, can compromise vision.The need is to develop a reliable and adaptable system to help patients by allowing healthcare professionals to diagnose and manage eye diseases, emphasizing accuracy, efficiency and early detection. |
| 2. | Idea / Solution description | Using Transfer Learning based approach to design a reliable and adaptable model that would accept image of patient’s retina scan and then detect if the patient belongs to one of the following categories : glaucoma', 'cataract', 'normal', 'diabetic\_retinopathy’. |
| 3. | Novelty / Uniqueness | Use of ResNet50 convolutional base for training the ML model using the image dataset. |
| 4. | Social Impact / Customer Satisfaction | The system enables quicker and more accurate detection of eye diseases, contributing to early intervention and improved treatment outcomes.It contributes to public health by offering accessible and efficient diagnostic tools.  Patients benefit from timely and accurate diagnoses, reducing anxiety and enabling prompt medical intervention. |
| 5. | Business Model (Revenue Model) | Subscription Model: Charging healthcare institutions or individual users for access to the detection system on a subscription basis.  Licensing Model: Licensing the technology to medical facilities, clinics, or AI developers for integration into their systems.  Partnerships: Collaborating with pharmaceutical companies, insurance providers, or research institutions for mutually beneficial ventures. |
| 6. | Scalability of the Solution | In future, as the number of users increases, utilizing cloud services for scalability would be the best solution. Shifting all the workload from local servers to cloud servers, enabling the system to handle increasing data volume and user demands efficiently. |