**Project Design Phase-I**

**Proposed Solution Template**

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| Date | 22 October 2023 |
| Team ID | Team-593212 |
| Project Name | Deep Learning Fundus Image Analysis For Early Detection Of Diabetic Retinopathy |
| 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) | The lack of accessible and timely diabetic retinopathy diagnosis poses a significant threat to patients with diabetes. Developing a precise, efficient, and cost-effective deep learning-based fundus image analysis system is imperative for early detection, ensuring timely intervention and preventing irreversible vision loss. |
| 2. | Idea / Solution description | Our solution entails creating a robust web-based application for fundus image analysis. Users can upload their fundus images securely, which are then processed in real-time using advanced deep learning algorithms. The system provides instant, accurate feedback, enabling early detection. Additionally, we plan to integrate telemedicine functionalities for remote consultations, enhancing the overall user experience. |
| 3. | Novelty / Uniqueness | Our innovative approach centers around a web-based platform, ensuring accessibility for users across various devices, including computers and tablets. The seamless integration of deep learning technology into a web application, coupled with telemedicine features, distinguishes our solution, providing a unique and efficient diagnostic experience. |
| 4. | Social Impact / Customer Satisfaction | By offering a user-friendly web-based platform, our solution ensures widespread accessibility and ease of use. Patients, regardless of their location, can benefit from timely and accurate diagnoses. This not only enhances customer satisfaction but also has a substantial social impact by preventing vision loss and improving overall quality of life. |
| 5. | Business Model (Revenue Model) | Subscription Model for Hospitals and Clinics: Hospitals and clinics subscribe to our service on a monthly or yearly basis, gaining unlimited access to generate reports for their patients, thereby ensuring a steady revenue stream.  Pay-per-Use Model for Individual Customers: Individuals who already possess their scan reports pay only when they utilize our system for diagnosis, ensuring cost-effectiveness and catering to their specific needs. |
| 6. | Scalability of the Solution | The web-based nature of the solution ensures high scalability. The platform can accommodate a growing user base without significant infrastructure changes. Integrating telemedicine services further enhances scalability, allowing consultations to scale based on demand. Collaboration models with pharmacies can be replicated in various regions, ensuring widespread implementation and scalability. |