Project Design Phase-I
Proposed Solution Template

Date	17 November 2023
Team ID	593035
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.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	**Overview:** The prevalence of eye diseases is a significant public health concern, with early detection being crucial for effective treatment. **Specific Problem:** Limited accessibility to timely eye screenings and the shortage of skilled professionals for early detection of eye diseases.
2.	Idea / Solution description	**Concept:** Develop a Deep Learning Model for automated eye disease prediction using medical imaging. **Technical Details:** Utilize convolutional neural networks (CNNs) for feature extraction from retinal images, enabling the model to identify patterns associated with various eye diseases. **Integration:** Integrate the model into an easy-to-use platform that accepts retinal images as input and provides a prediction of potential eye diseases.
3.	Novelty / Uniqueness	**Advanced Algorithms**: Employ state-of- the-art deep learning techniques for improved accuracy and reliability in identifying diverse eye diseases. **Adaptability:** The model will continuously learn from new data, ensuring it stays up-to-date with emerging patterns and variations in eye diseases.
4.	Social Impact / Customer Satisfaction	**Early Detection:** Enable early detection of eye diseases, leading to timely intervention and improved treatment outcomes. **Accessibility:** Increase accessibility to eye screenings, particularly in underserved areas, through a user- friendly platform that allows

		remote image submission. **Educational Resources:** Provide information and resources related to eye health to enhance user awareness and proactive eye care.
5.	Business Model (Revenue Model)	**Freemium Model:** Offer basic eye screening services for free, with premium features such as detailed analysis reports, priority support, and additional educational content available through a subscription model. **Partnerships:** Collaborate with healthcare providers and institutions for bulk licensing of the platform, creating a revenue stream through institutional subscriptions.
6.	Scalability of the Solution	**Cloud Infrastructure:** Host the deep learning model on scalable cloud platforms to handle varying loads efficiently. **Data Handling:** Design the system to accommodate a growing dataset, ensuring the model's scalability as more diverse data becomes available. **Global Reach:** Plan for multi-region deployment to ensure the solution is accessible and performs well across different geographic locations.

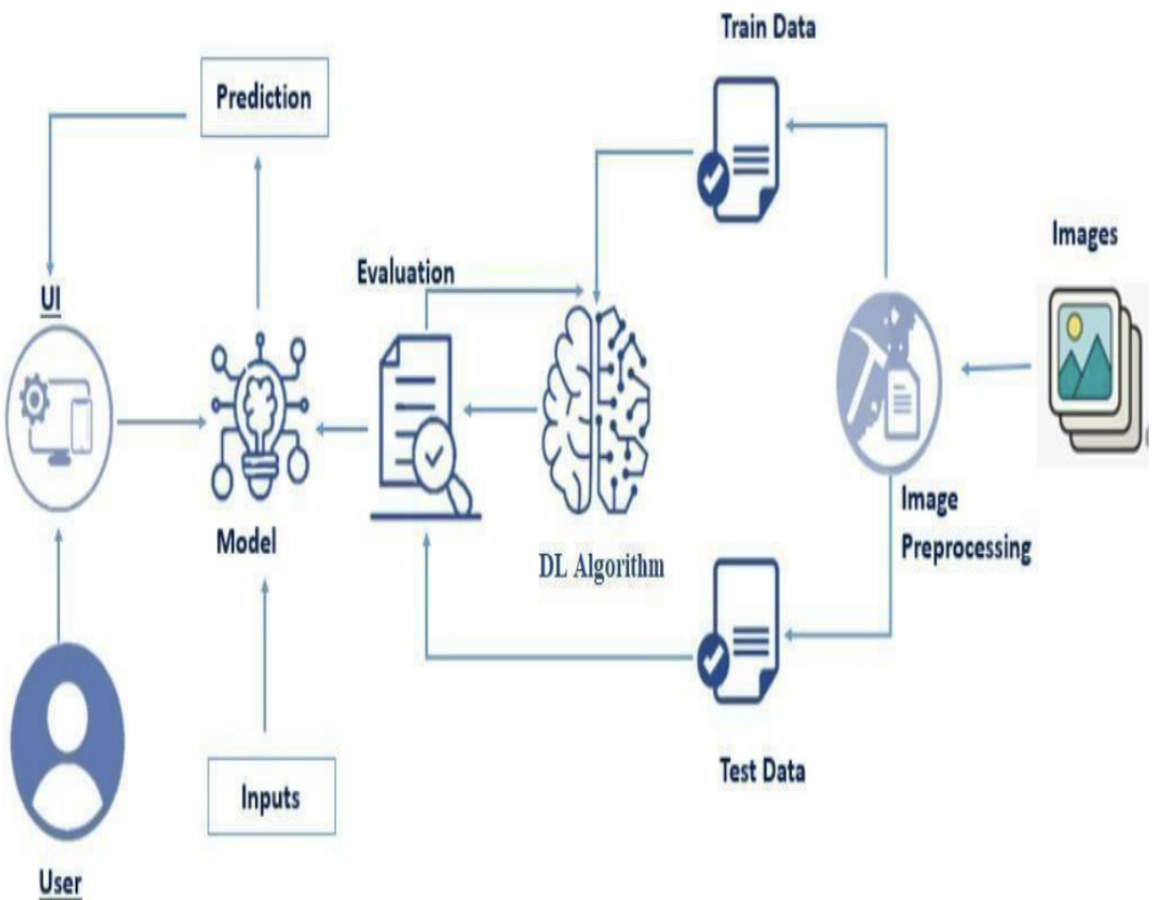
Solution Architecture

Date	19 November 2023
Team ID	593035
Project Name	Deep Learning Model For Eye Disease Prediction
Maximum Marks	4 Marks

Solution Architecture:

Solution architecture is a complex process – with many sub-processes – that bridges the gap between business problems and technology solutions.

Solution Architecture Diagram:

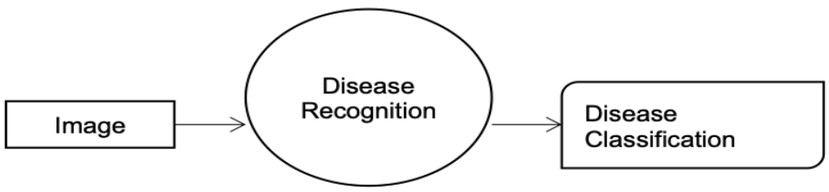


Project Design Phase-II

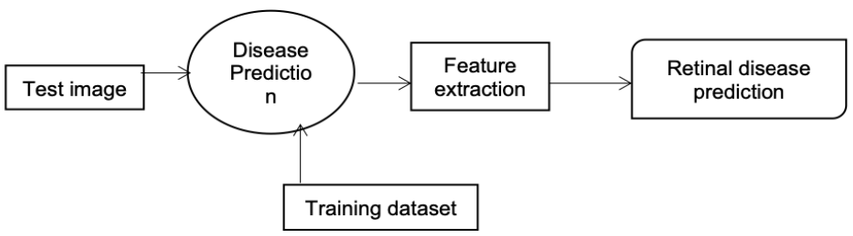
Data Flow Diagram & User Stories

Date	20 November 2023
Team ID	593035
Project Name	Deep Learning Model For Eye Disease Prediction
Maximum Marks	4 Marks

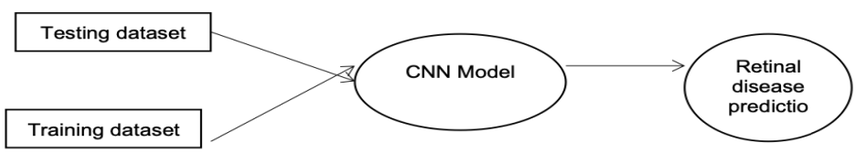
Data Flow Diagrams:



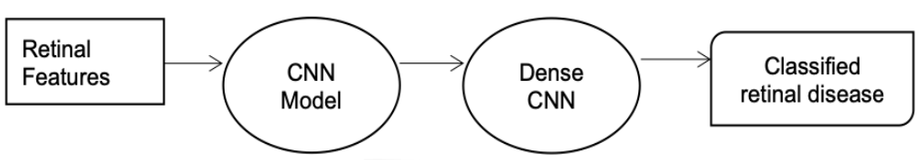
Level 0 DFD



Level 1 DFD



Level 2 DFD



Level 3 DFD

User Stories

Use the below template to list all the user stories for the product.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Mobile user)	Eye Disease Prediction	USN-1	As a user, I can upload an image of my eye to the application and receive a prediction of whether I have an eye disease	The application will display the predicted eye disease and the probability of the prediction.	High	Sprint-1
		USN-2	As a user, I can view a list of all the eye diseases that the application can predict	The application will display a list of eye diseases with their correspondi ng descriptions .	High	Sprint-1
Customer (Web user)	Eye Disease Prediction	USN-3	As a web user, I can upload an image of my eye to the application and receive a prediction of whether I have an eye disease.	The web application will display the predicted eye disease and the probability of the prediction.	High	Sprint-1