

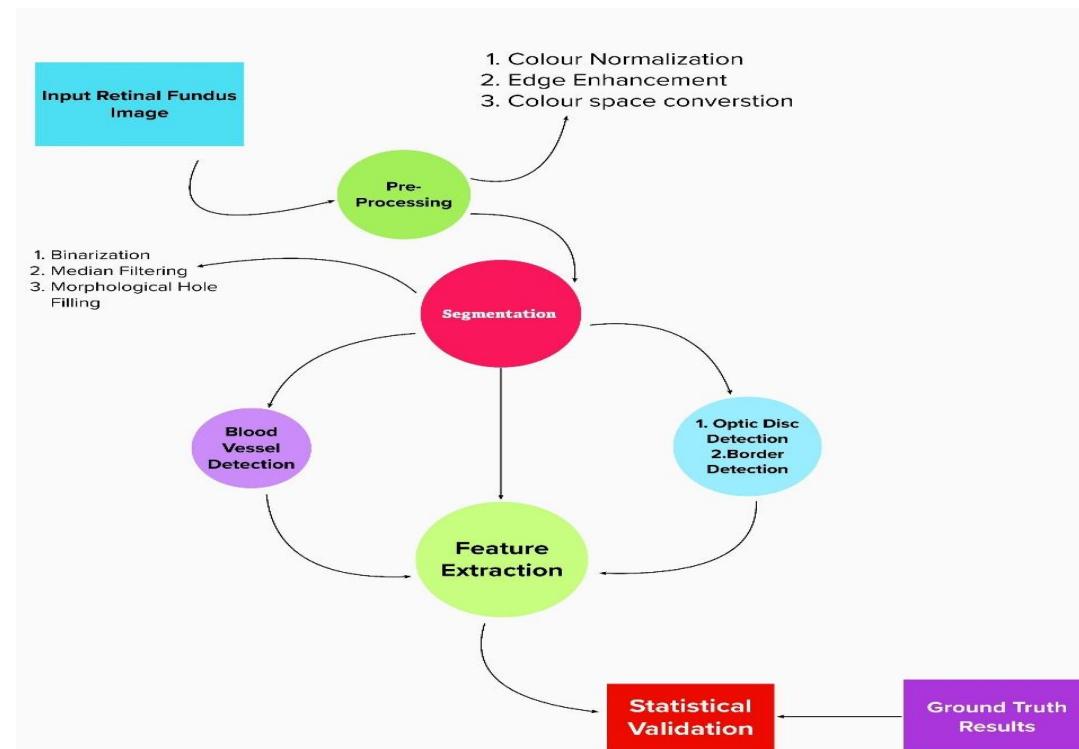
## Project Design Phase-II

### Data Flow Diagram & User Stories

Date	16 October 2022
Team ID	PNT2022TMID16537
Project Name	Deep Learning Fundus Image Analysis for Early Detection of Diabetic Retinopathy
Maximum Marks	4 Marks

#### Data Flow Diagrams:

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.



- The retinal fundus images are commonly used for detection and analysis of diabetic retinopathy disease in clinics.
- Pre-processing of raw retinal fundus images are performed using extraction of green channel, histogram equalization, image enhancement and resizing techniques.
- The segmentation of retinal vasculature from eye fundus images is a fundamental task in retinal image analysis.
- The computer aided automatic detection and segmentation of blood vessels through the elimination of optic disc (OD) region in retina.
- The retinal blood vessels are detected using mathematical binary morphological operations.
- Feature extraction from the fundus images for the diagnosis of Diabetic Retinopathy refers to an advanced eye screening technology by which eye related diseases can be detected at an early stage.

### User Stories

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Patient (Web user)	Registration	USN-1	As a user, I can register through website either email id or phone number with password.	I can create my account.	High	Sprint-3
	Login	USN-2	As a user, I can login to the site by the given Login credentials.	I can login and access my account.	High	Sprint-3
	Upload image	USN-3	As a user, I can upload my data in the form of pdf, doc etc.	I can upload my data's.	Medium	Sprint-3
Administration (Web developer)	Admin login	USN-4	As an Admin I can login to the site and analyse the user data.	I can login and analyse the user data.	High	Sprint-3
	Data collection	USN-5	As an admin, I can collect the dataset related to the DR from source.	I can collect the dataset.	Low	Sprint-1
	Create model	USN-6	As an admin, I can create the model and train the model from the dataset for prediction.	I can create and train the model.	High	Sprint-1
	Test the model	USN-7	As an admin, I can test the model for prediction.	I can test the model.	High	Sprint-2
Patient (Web user)	Diagnosis	USN-8	As a user I can get the diagnosis result on the application and follow up with treatments.	He/she can get the results and continue the treatment.	High	Sprint-2