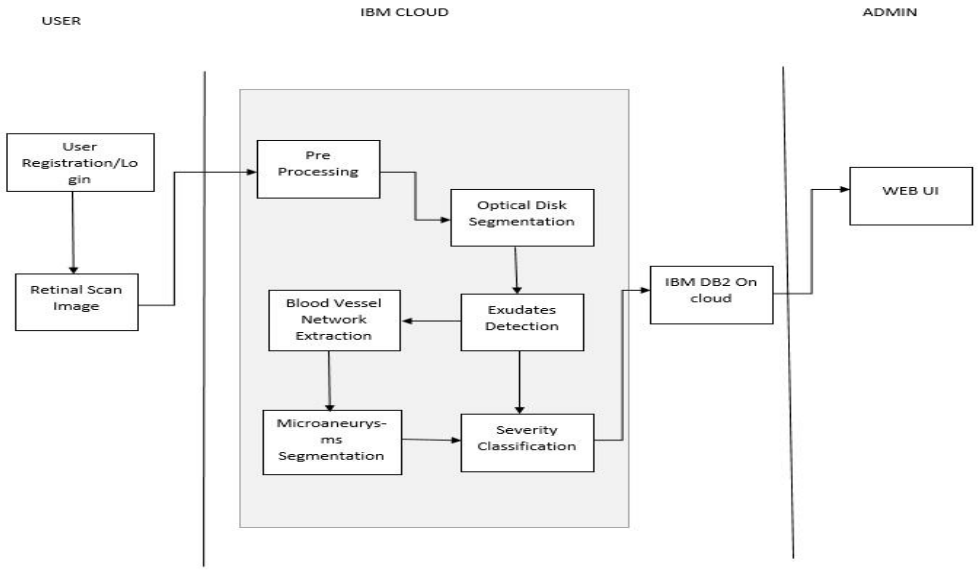
Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	03 October 2022
Team ID	PNT2022TMID02274
Project Name	Deep Learning Fundus Image Analysis for Early Detection of Diabetic Retinopathy
Maximum Marks	4 Marks

Technical Architecture:



Guidelines:

1. Include all the processes (As an application logic / Technology Block)
2. Provide infrastructural demarcation (Local / Cloud)
3. Indicate external interfaces (third party API's etc.)
4. Indicate Data Storage components / services
5. Indicate interface to machine learning models (if applicable)

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	User interacts with Web UI	HTML, CSS, JavaScript
2.	Application Logic-1	Logic for a process in the application	Python
3.	Application Logic-2	Logic for a process in the application	IBM Watson STT service
4.	Application Logic-3	Logic for a process in the application	IBM Watson Assistant
5.	Database	BLOB image datatype	MySQL
6.	Cloud Database	Database Service on Cloud	IBM DB2
7.	File Storage	File storage requirements	IBM Block Storage
8.	External API-1	Purpose of External API used in the application	NIL
9.	Machine Learning Model	Purpose of Machine Learning Model: to predict the results	Image Recognition Model - CNN
10.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud	Cloudant DB

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	The open source framework is used to provide functionalities	Django
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	Django
3.	Scalable Architecture	The app should be capable of being expanded to a larger user base and still function the way it is intended to be	Django

S.No	Characteristics	Description	Technology
4.	Availability	It is available around the clock 24x7	Django
5.	Performance	The processing time of the web application (i.e time taken to enter the details and fetch results) is low	Django