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

Date	15 October 2022
Team ID	*PNT2022TMID43448*
Project Name	Deep Learning Fundus Image Analysis for Early Detection of Diabetic Retinopathy
Maximum Marks	4 Marks

Technical Architecture:

Project will fulfill the following information in this technology architecture.

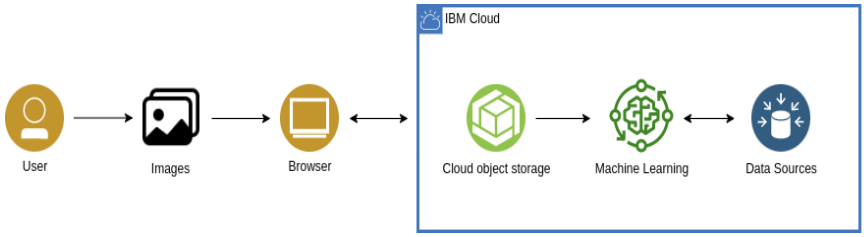

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript etc.
2.	Application Logic-1	Logic for a process in the application	Python, Flask
3.	Database	Data Type, Configurations etc.	MySQL, NoSQL, etc.
4.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
5.	Machine Learning Model	Purpose of Machine Learning Model	Diabetic Retinopathy detection
6.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Cloud.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	Flask, TensorFlow. Keras. Numpy, Pandas
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	Built-in protection.
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	3-tiers.
4.	Availability	Justify the availability of applications (e.g. use of load balancers, distributed servers etc.)	Load balancer.
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	It depends upon the input images.