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

Date	03 October 2022
Team ID	PNT2022TMID33027
Project Name	Deep Learing Fundus Image Analysis for Early Detection of Diabetic Retinopathy
Maximum Marks	4 Marks

Technical Architecture:

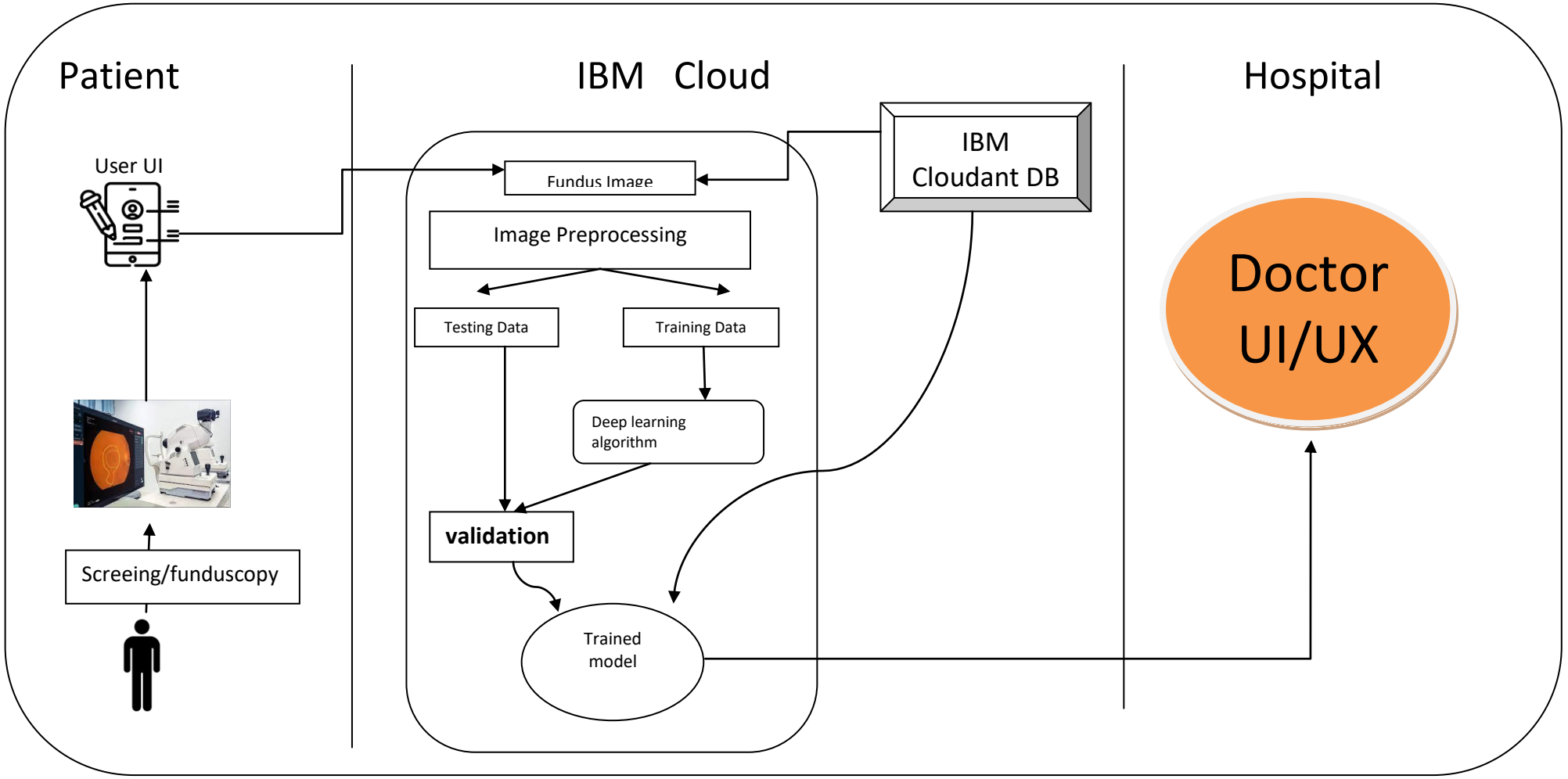

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript
2.	Application Logic-1(Back-end)	Logic for a process in the application and the UI	Python, Flask
3.	Application Logic-2	Logic for a process in the application and cloud	IBM Watson STT service
4.	Cloud Database	Database Service on Cloud	IBM Cloudant.
5.	File Storage	File storage requirements	IBM Block Storage
6.	Machine Learning Model	Purpose of Machine Learning Model	Deep Learning, Convolutional Neural Network.
7.	Infrastructure (Server / Cloud)	Application Deployment on Cloud	IBM Cloud.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	Front end apps
2.	Security Implementations	Email constraint and database	Mail notifications, IBM free trial cloud instant service.
3.	Scalable Architecture	Scalability of architecture (3 – tier, Micro-services) is extensible as it is web-oriented with database application	Cloudant DB, Front end apps
4.	Availability	Availability of application (e.g. use of load balancers, distributed servers etc.)	Open source platforms provide great service.
5.	Performance	Session management & Model Accuracy	User sessions from automatic controller provided by python.