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

Date	22 October 2022
Team ID	PNT2022TMID05538
Project Name	A Gesture-based Tool for Sterile Browsing of Radiology Images
Maximum Marks	4 Marks

Technical Architecture:

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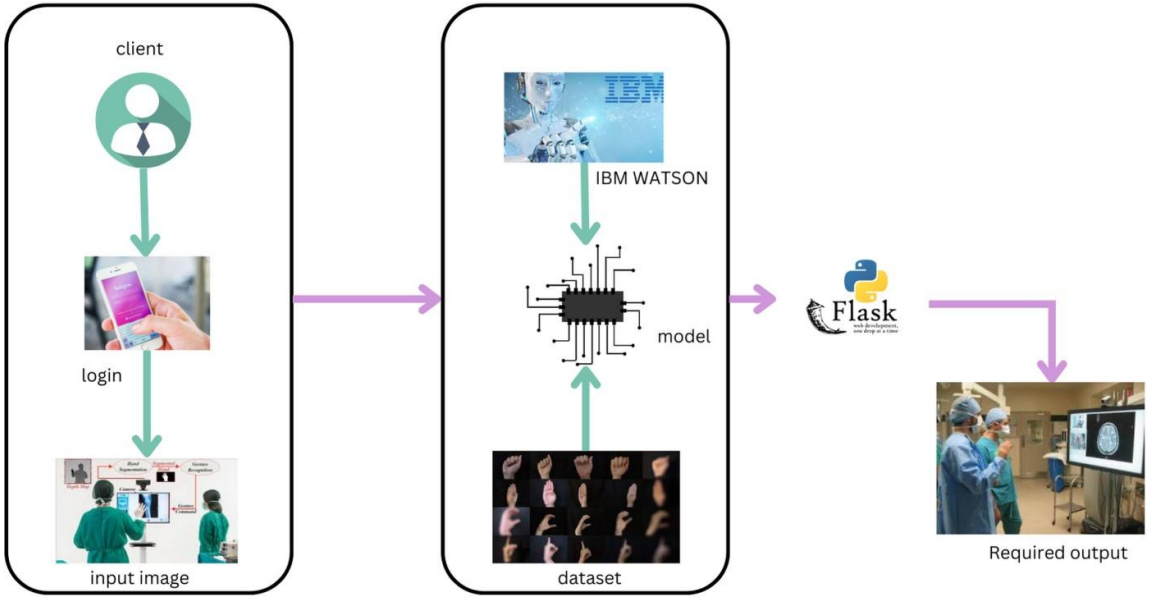

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	The system and user can interact with UI	Python Flask, HTML, CSS
2.	Application Logic-1	Feed the user input	Python
3.	Application Logic-2	Create the model for gesture recognition	IBM Watson, Python
4.	Application Logic-3	Getting model output for respective gesture	IBM Watson, Python
5.	Database	Data Type – Images and user inputs details are stored	MySQL, Js, IBM DB2
6.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
7.	File Storage	Received user details and received user input images of the gesture is stored in cloud	IBM Block Storage, IBM cloud
8.	Machine Learning Model	Purpose of the AI Model is to predict the gesture.	Object Recognition Model, and CNN based model for hand gesture recognition
9.	Infrastructure (Server / Cloud)	On cloud server we will be deploying the AI Model using flask in the web page	Python Flask,IBM Cloud

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Open-source frameworks used is IBM Watson	Technology of Open Source framework-IBM Watson
2.	Security Implementations	Certified Watson assistant for Encrypted file systems, Encrypted storage systems, Key management systems.	IBM Cloud
3.	Scalable Architecture	• Static and dynamic website content present in the website will be update based uponuser demands and suggestion • Updation of the basic functionality of the website and integration of new features for gesture recognition can be done • Based upon the accurate recognition of the gesture,that corresponding user input image can be added to the database.The model can be retrained for the new database once in a month.	Python, IBM Watson Assistant, MySQL
4.	Availability	The AI model is made available instantly to user at any point of time	IBM Watson Cloud assistance
5.	Performance	The deep learning model is trained using IBM Watson studio for better performance and quick accessibility .	IBM Watson Assistant