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

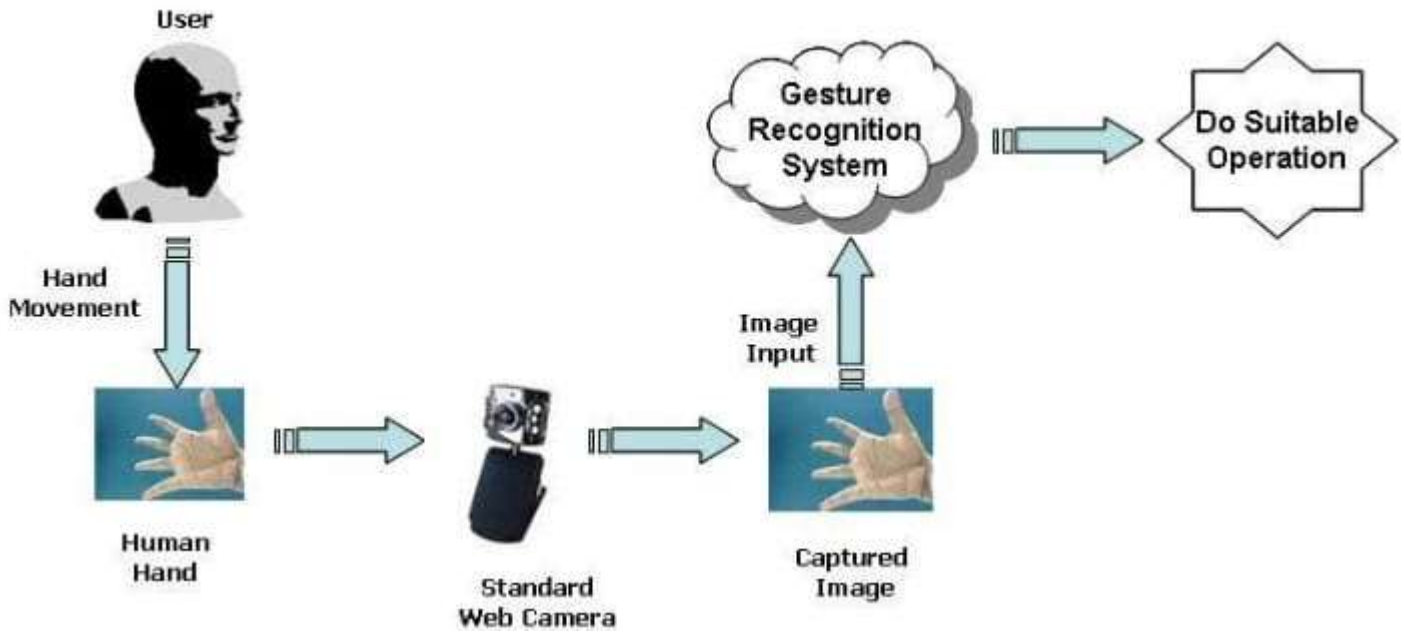
Date	26 October 2022
Team ID	PNT2022TMID33174
Project Name	Project -A Gesture based tool for sterile browsing of radiology images
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

Example: Order processing during pandemics for offline mode

Reference: **https://developer.ibm.com/pavtterns/ai-powered-backend-system-for-order-processing-during-pandemics/**



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	The user interface with application	Python
2.	Application Logic-1	Logic for performance of the process to execute desired output	Python
3.	Application Logic-2	Google is used to deploy the CNN model	Google service
4.	Data base	Compute data type	SVM and HOG
5.	Cloud Database	Data base service on cloud	Google cloud
6.	File Storage	Files like dataset for the use of training and testing can be stored in local systems	Google block Storage or Other Storage Service or Local Filesystem
7.	External API-1	Purpose of External API used in the application	API,Google open sources
9.	Machine Learning Model	Purpose of Machine Learning Model	Image Recognition Model, CNN
10.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration	Google cloud

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	The open source frameworks google cloud,google open sources	Technology of IBM cloud is software as a services and infrastructure as a service , technology of google open sources

2.	Security Implementations	The security are mainly related to the cloud services,they have strict security access the network	Google-media pipe hands,open cv
3.	Scalable Architecture	A vision based approach is used to build a dynamic hand gesture recognition system various challenges like complicated background,change in illumination occlusion makes detection and tracking of hand difficult in any vision based approaches	An artificial intelligence is used .It gives appropriate detection of hand recognition.
4.	Availability	As the functional requirements are mostly open sources , they are highly available to all anyone can make use of it	(open source)Python
5.	Performance	A process in which the gestures or postures of human body parts are identified and are used to control computers and other electronic appliances	Google cloud makes the process more feasible

References:

https://c4model.com/

https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/

https://www.ibm.com/cloud/architecture https://aws.amazon.com/architecture

https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d