PROJECT DESIGN
PHASE – II

Technical Architecture:

DATE	**22 October 2022**
TEAM ID	**PNT2022TMID29553**
PROJECT NAME	**A Gesture - Based Tool for Sterile Browsing of Radiology Ideations Images**
MAXIMUM MARKS	**4 Marks**

Technical Architecture:

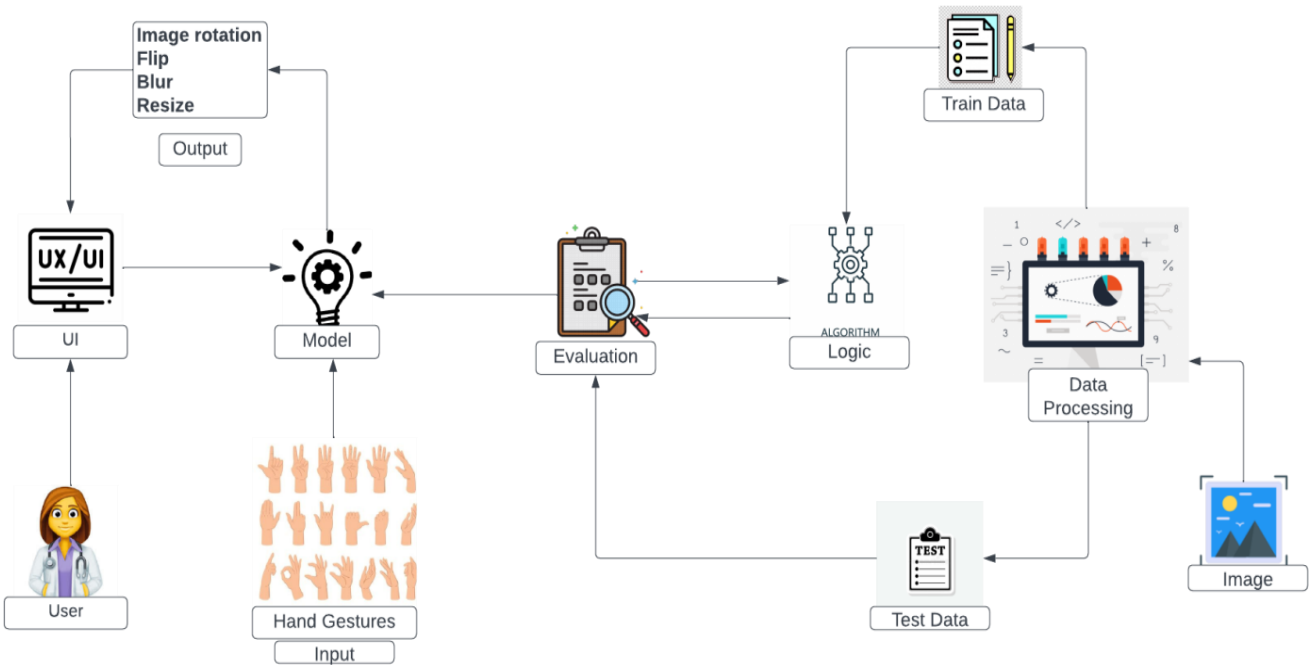

Table-1: Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App etc.	HTML, CSS, JavaScript ,React JS
2.	Application Logic-1(Data Preprocessing)	Variety of frameworks, libraries and Images are imported	Python
3.	Application Logic- 2(model building)	Build CNN model to convert the hand gestures to surf on the internet and communicate with computer.	Python,IBM Watson STT service

4.	Application Logic- 3 (Application Building)	Create HTML file for front end	HTML, CSS, Javascript .
5.	Dataset	Collect the hand gesture dataset	From Internet
6.	Cloud Database	Database service on cloud to train model	IBM DB2, IBM Cloudant etc.
7.	File Storage	File storage should be highly flexible, scalable to store the code and dataset.	IBM Block Storage or Local File system
8.	Machine Learning Model	Machine Learning Model deals with various algorithms that are needed for the implementation	CNN ,Opencv ,Object recognition model etc.
9.	Infrastructure	Application Deployment on Local System /Cloud Local Server Configuration: Install the windows version and execute the installer.	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	The frameworks used in this project are web application development, data pre - processing.	Tensor flow , RNN, pyTorch, Flask
2.	Security Implementations	The access controls are implemented using firewalls and encryption of data is done .	Firewall and other security related software's.
3.	Scalable Architecture	Our model can work at environment where gesture actions are in bright and dim backgrounds.	Data, models, operate at size, speed, consistency and complexity
4.	Availability	This model is used to reduce the infections of spreading germs.	Image recognition , CNN , Opencv
5.	Performance	The system responds to the user in fraction of seconds and the hardware and software works well.	CNN using machine learning for communication.