PROJECT DESIGN PHASE – II

Technical Architecture

DATE	15 OCTOBER 2022
TEAM ID	PNT2022TMID29207
PROJECT NAME	A Gesture - Based Tool for Sterile Browsing of Radiology Ideations Images
MAXIMUM MARKS	4 Marks

Technical Architecture:

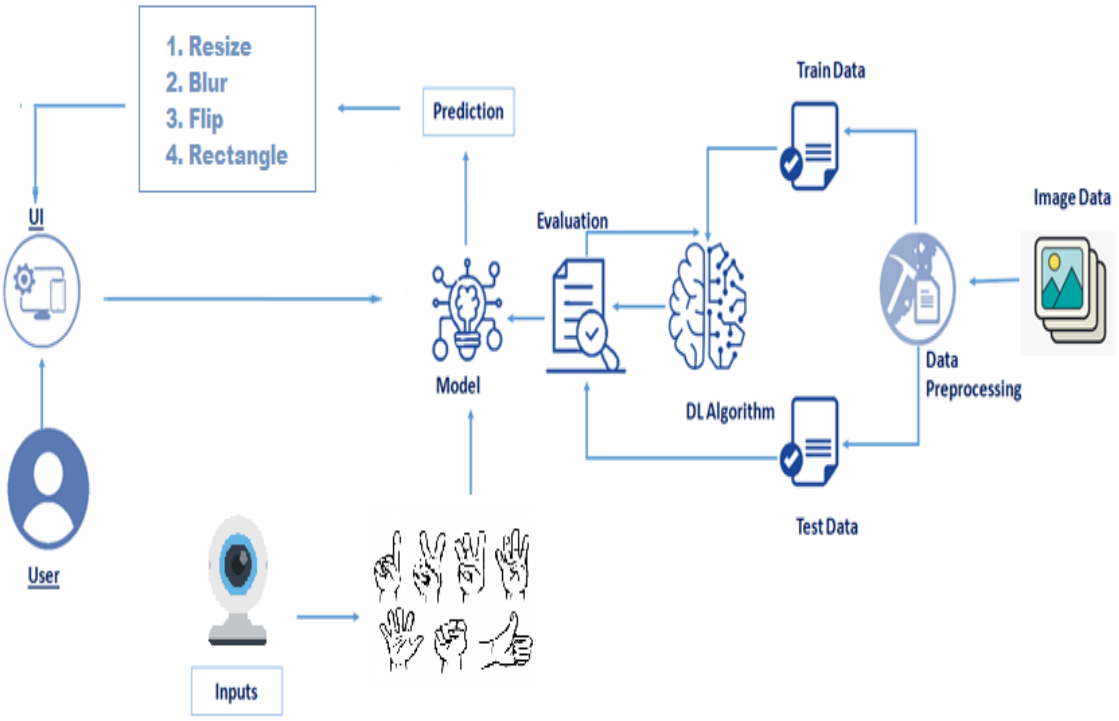

Table-1: Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc	HTML, CSS, JavaScript / Angular JS / React JS etc.
2.	Application Logic-1	Variety of frameworks, libraries and Supports are required to develop the project.	Java / Python
3.	Application Logic-2	Helps to convert the hand signs and hand gestures into the written words to surf on the internet and communicate with computer.	IBM Watson STT service
4.	Application Logic-3	Provides fast, consistent and accurate answers after recognizing the human hand gestures and signs.	IBM Watson Assistant
5.	Database	It can be numerical, categorical or time-series data.	MySQL, NoSQL, etc.
6.	Cloud Database	Enables the user to use host database without buying the additional hardware	IBM DB2, IBM Cloud ant etc.
7.	File Storage	File storage should be highly flexible, scalable, effective, fast and reliable.	IBM Block Storage or Other Storage Service or Local Filesystem.
8.	External API-1	Used to access the information in the cloud.	IBM Weather API, etc.
9.	External API-2	Used to access the information for data driven decision making.	Aadhar API, etc.
10.	Machine Learning Model	Machine Learning Model deals with various algorithms that are needed for the implementation	Image Recognition Model, etc.
11.	Infrastructure (Server / Cloud)	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 the project are used.	Tensor flow, Theano, RNN, py Torch, Flask
2.	Security Implementations	The security / access controls are implemented using firewalls etc.	Firewall and other security related software's.
3.	Scalable Architecture	the scalability of architecture (3 – tier, Microservices)	Data, models, operate at size, speed, consistency and complexity.
4.	Availability	The availability of application (e.g., use of load balancers, distributed servers etc.)	Image and facial recognition, speech recognition and real time captioning.
5.	Performance	Design aspects for the performance of the application (number of requests per second, use of Cache, use of CDN's) etc.	Full and effective participation, equality of opportunity, accessibility, using machine learning for communication.