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

Date	20 October 2022
Team ID	PNT2022TMID28865
Project Name	Project –A Gesture-based Tool for Sterile Browsing of Radiology
Maximum Marks	4 Marks

TECHNICAL ARCHITECTURE

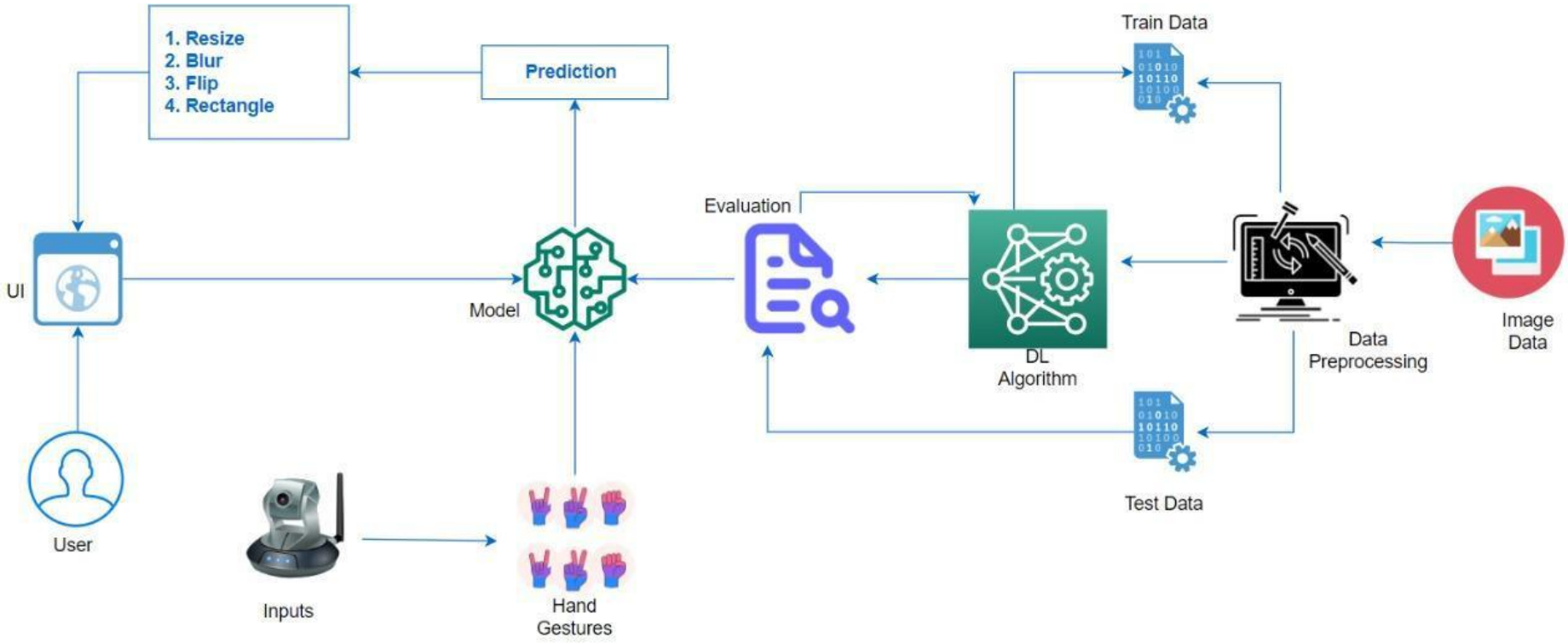

TABLE-1 : COMPONENTS & TECHNOLOGIES

S.NO	COMPONENTS	DESCRIPTION	TECHNOLOGY
1.	User Interface	Web UI	HTML, CSS, JavaScript.
2.	**Application Logic-1** Pre-processing of image	Library files are used to pre-process the input image.	Python, TensorFlow
3.	**Application Logic-2** Model Building	Constructing a CNN model to detect the gesture.	Python, Keras
4.	**Application Logic-3** Creating Application	The Application is created to receive gestures as input and to output them.	HTML, CSS, JavaScript
5.	Collecting the Dataset	Dataset of Hand gestures is collected.	From IBM
6.	Cloud Database	The cloud is used to store a user-supplied image.	IBM Cloud
7.	Storage of files	The data set and source code is stored in files.	Server and Local Filesystem
8.	ML Model	The pre-processed image is identified using the CNN model either by image capture or video segmentation.	CNN Model by Python, Keras

TABLE-2: APPLICATION CHARACTERISTICS:

S.NO	CHARACTERISTICS	DESCRIPTION	TECHNOLOGY
1.	**Open-Source Frame works**	Formodel building, package managerand code development	Visual Studio Code, Conda, TensorFlow
2.	**security Implementation**	List all the security / access control implemented, use of firewalls.	Encryption and Decryption.
3.	**Scalable Architecture**	Justify the scalable Architecture i.e.,use of load balancer	IBM Cloud
4.	**Availability**	Justify the availability of application	TensorFlow, Keras
5.	**Performance**	To generate more data from a smallno of images, data augmentation is used.	Keras