Technology Stack (Architecure and Stack)

1.Resize
2.Blur
3.Flip
4.Rectangle

Prediction

Train data

UI

Model

Evaluation

DL algorithm

Data-preproc essing

Image data

Test data

User

Inputs
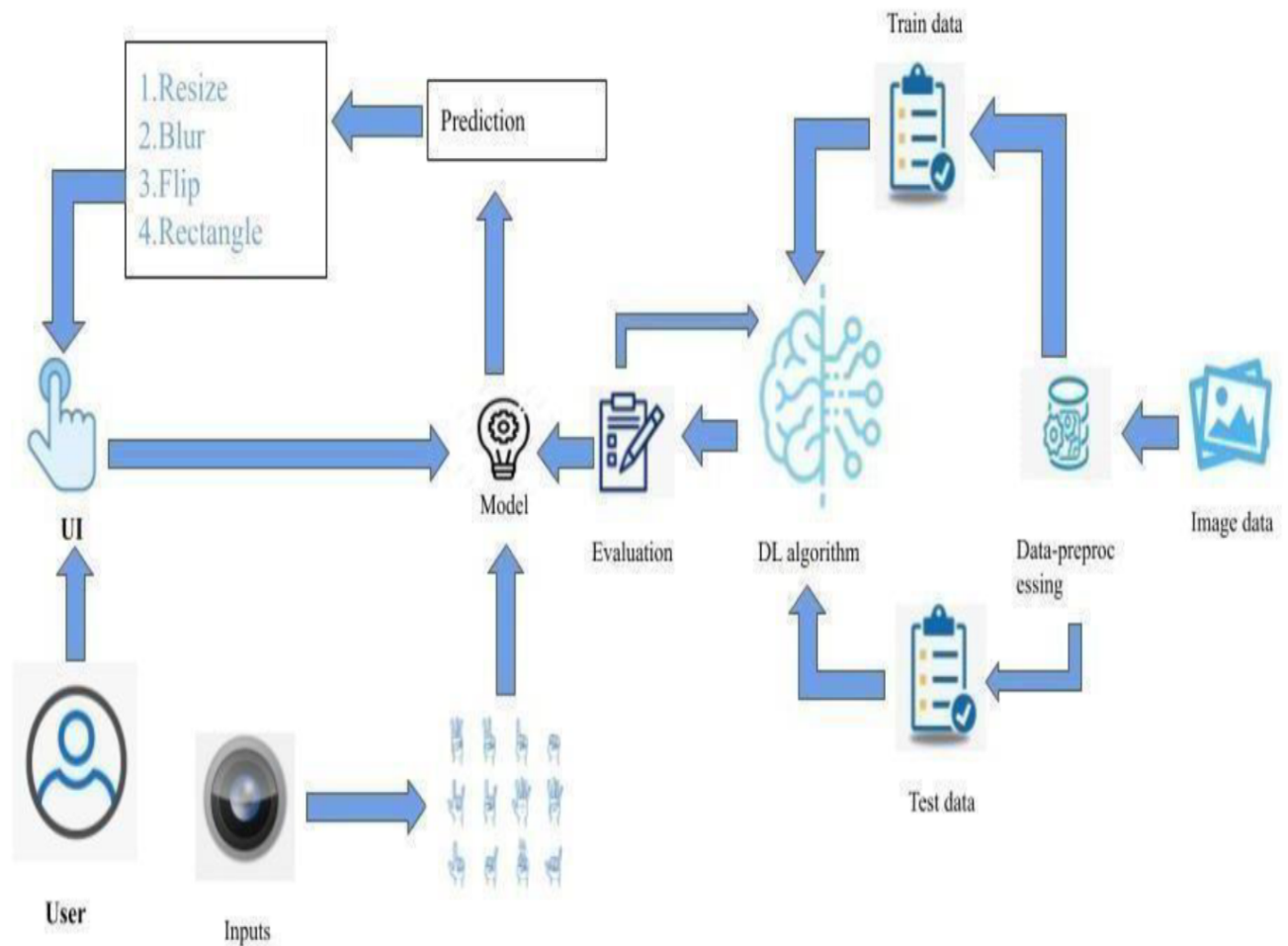
Sr No.	Component	Description	Technology
1.	User Interface	Web UI	HTML, CSS, Javascript
2.	Dataset	Collect or create the hand gesture dataset	From Online
3.	Application Logic 1- Data Preprocessing	Import all data files required for data preprocessing	From Online
4.	Application Logic 2- Model Building	Building the CNN Model	Python
5.	Application logic 3- Application Building	Create HTML file	HTML, CSS, Javascript
6.	File Storage	Store the code files and datasets	System Storage
7.	Deep Learning	Used to analyse visual imagery, image processing,video capture and analysis including features like face detection and object detection	CNN, Open CV
8.	Cloud Database	Train the model on IBM cloud	IBM cloud

Sr No.	Characterstics	Description	Technology
1.	Open source Frameorks	Application development- data preprocessing	Visual studio code, Anaconda Navigator
2.	Security	It identifies the gestureaction only when the hand is in front of the camera	Opencv
3.	Scalable Architecture	It can be used in any environment and is able to identify the gedutre actions in both bright and dim backgrounds. It can recognize gesture upto 5 meters distance between camera and person	Opencv
4.	Availability	It is used to reduce the possibility of spread of infections, avoid the delay and focus of doctors on surgery is improved.	Artificial Intelligence
5.	Performance	Rapid response to the gesture actions	CNN model