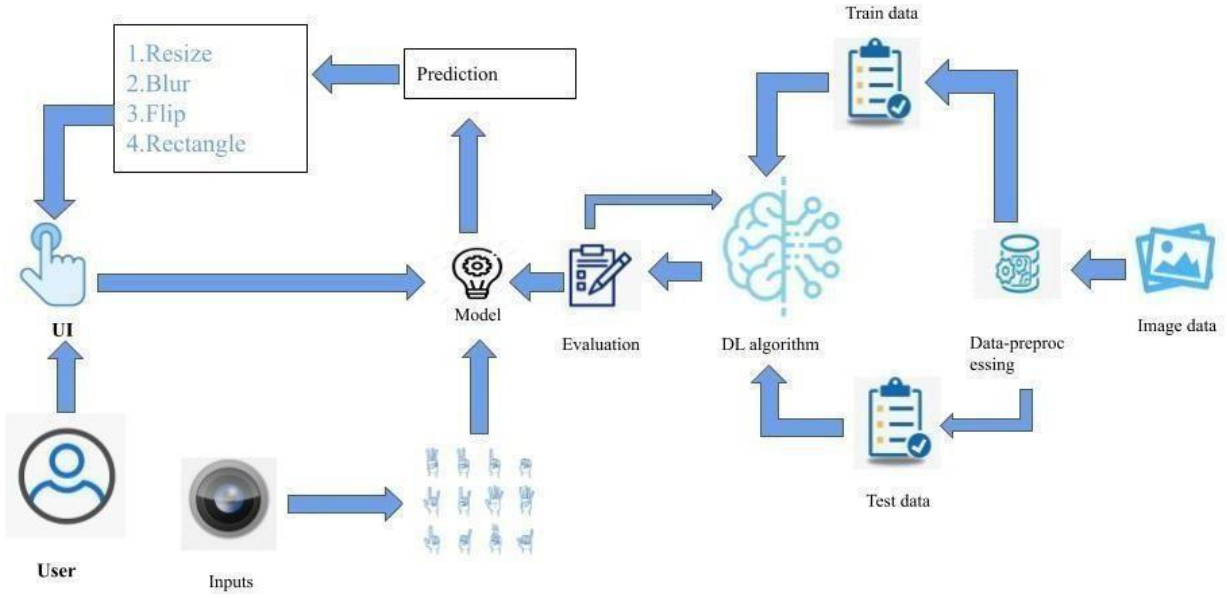
Project Design Phase 2
Technology Stack (Architecture & Stack)

Team ID	PNT2022TMID24631
Project Name	A Gesture-based Tool for Sterile browsing of Radiology Images

Technical Architecture:



S.No.	Characteristics	Description	Technology
1.	Open-Source frameworks	Application development, data pre-processing.	Visual studio code, anaconda navigator.
2.	Security	It identify the gesture action 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 gesture actions in both bright and dim backgrounds. It can recognize the gesture action upto 5 meters distance between the camera and person.	Opencv

S.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 the library files required for data preprocessing.	Python
4.	Application logic-2- Model building.	Build 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 analyze visual imagery, image processing, video capture and analysis including features like face detection and object detection.	CNN, Opencv
8.	Cloud database	Train the model on IBM cloud	IBM cloud

APPLICATION CHARACTERISTICS:

S.No.	Characteristics	Description	Technology
4.	Availability	It is used to reduce the possibility of spreading infections, avoid the delay and the focus of doctors on surgery is improved.	Artificial intelligence
5.	Performance	Rapid response to the gesture actions.	CNN model