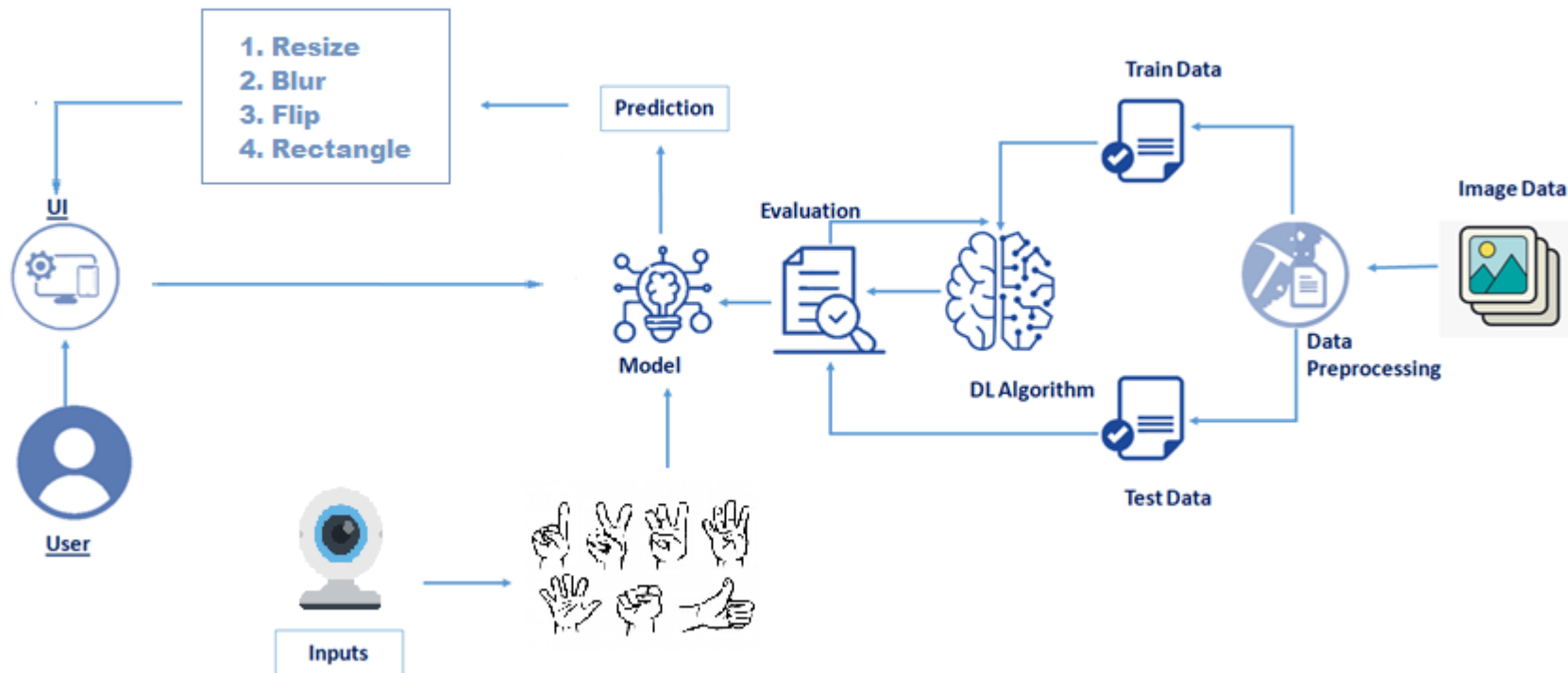


**Project Design Phase-II**  
**Technology Stack (Architecture & Stack)**

Date	03 October 2022
Team ID	PNT2022TMID52914
Project Name	Project – A Gesture-based Tool for Sterile Browsing of Radiology
Maximum Marks	4 Marks

**Technical Architecture:**



**Table-1 : Components & Technologies:**

S.No	Component	Description	Technology
1.	User Interface	Web UI	HTML, CSS, JavaScript .
2.	Application Logic-1 Image Pre-Processing	Input image is pre-processed with the help of library files .	Python , TensorFlow
3.	Application Logic-2 Building the model	Building CNN model to recognize the gesture.	IBM Watson STT service
4.	Application Logic-3 Building the model	App is built to obtain gesture as input and to provide as output.	IBM Watson Assistant
5.	Dataset	Hand gesture data set.	MySQL, NoSQL, etc.
6.	Cloud Database	User input image is stored in cloud.	IBM DB2, IBM Cloudant etc.
7.	File Storage	File storage contains dataset and source code	IBM Block Storage or Other Storage Service or Local Filesystem
8.	Machine Learning model	CNN Model was used to recognize the preprocessed image by image capturing or by video segmenting.	IBM Weather API, etc.

**Table-2: Application Characteristics:**

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	For development of code, package manager, for building model	Visual Studio Code, Conda, TensorFlow
2.	Resilient	Gestures can be captured in different environments (variable brightness and distance).	OpenCV, TensorFlow
3.	Availability	Deploy on highly available server	IBM Cloud
4.	Performance	CNN model is used to predict the input gesture in a shorter span of time.	TensorFlow, Keras
5.	Diverse Dataset	Data augmentation to generate more data from limited set of images.	Keras