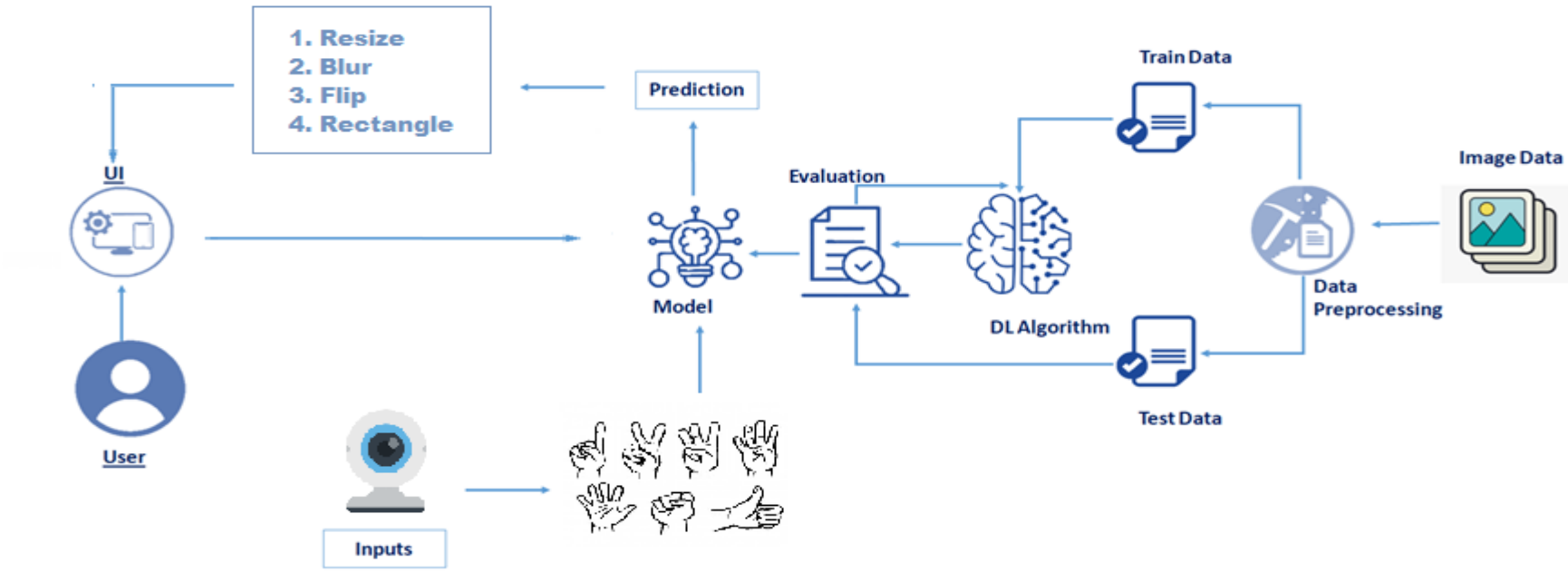
Project Design Phase-II

Technology Stack (Architecture & Stack)

Team ID	PNT2022TMID16461
Project Name	A Gesture-Based Tool for Sterile Browsing of Radiology Images

Technical Architecture:



A Gesture – Based Tool for Sterile Browsing of Radiology Images

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	To develop the project variety of frameworks, libraries and supports are required.	Java / Python
3.	Application Logic-2	Helps to convert the hand gestures and communicates with the computer.	IBM Watson STT service
4.	Application Logic-3	It provides accurate answers after recognizing the human hand gesture.	IBM Watson Assistant
5.	Database	It can be numerical, time series data.	MySQL, NoSQL, etc.
6.	Cloud Database	Database Service on Cloud.	IBM DB2, IBM Cloudant etc.
7.	File Storage	File storage will be reliable, scalable, fast and flexible.	IBM Block Storage or Other Storage Service or Local Filesystem
8.	External API-1	Access information in the cloud.	IBM Weather API, etc.
9.	External API-2	Access the information for data driven decision making.	Aadhar API, etc.
10.	Machine Learning Model	Purpose of Machine Learning Model deals with various algorithm for the implementation.	Image Recognition Model, etc.
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration:	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S. No	Characteristics	Description	Technology
1.	Open-Source Frameworks	The open-source frameworks used in project are	Py Torch, Tensor flow, Flask.
2.	Security Implementations	The security / access controls implemented, use of firewalls etc.	Other security related software's.
3.	Scalable Architecture	The scalability of architecture (3 – tier, Micro-services)	Data models, operate at size, consistency and speed.
4.	Availability	The availability of application (e.g. use of load balancers, distributed servers etc.)	Image recognition and real time captioning.
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Full and effective participation, equality of opportunity, accessibility.