

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

Date	03 October 2022
Team ID	PNT2022TMID09339
Project Name	Project – Real time communication system powered by AI for specially abled
Maximum Marks	4 Marks

Technical Architecture:

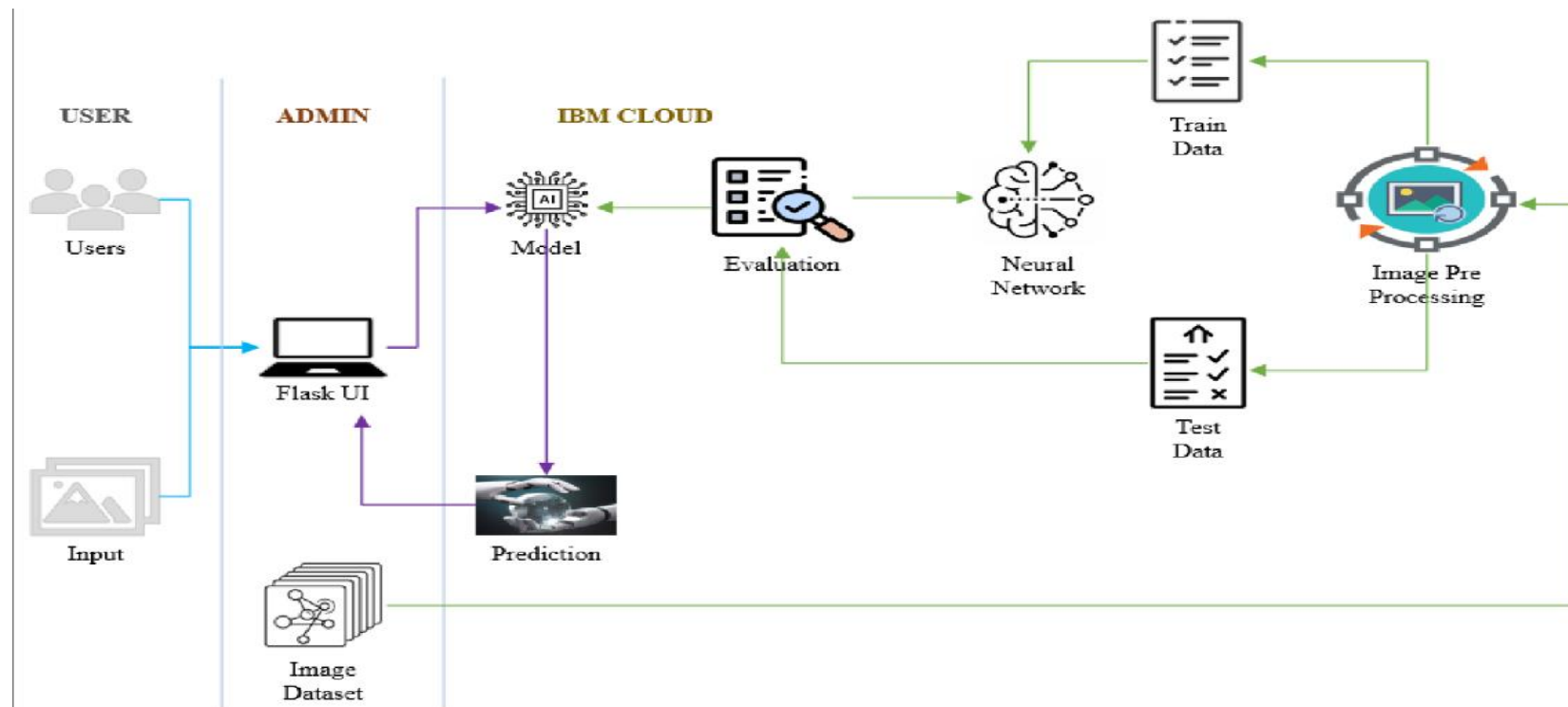


Table-1: Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Allows user to interact with the application	Python flask, HTML, CSS, JS
2.	Application Logic-1	Requires libraries and frameworks to build the model	Python libraries
3.	Application Logic-2	Classification of gesture images is done using SVM	Machine learning
4.	Application Logic-3	Provides response after recognizing gestures	ANN, CNN, OpenCV
5.	Database	Numerical or categorical data	MySQL,
6.	Cloud Database	Database Service on Cloud which allows to host the database	IBM DB2, IBM Cloudant
7.	File Storage	Fast, flexible, reliable	IBM Block Storage
8.	External API-1	Fast access to information in the cloud.	IBM Weather API
9.	External API-2	Use the information to make decisions	Aadhar API
10.	Machine Learning Model	Reduce man's work and makes it more autonomous	Object Recognition Model
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 framework used for implementation	TensorFlow, pytorch
2.	Security Implementations	Provides security control	firewall
3.	Scalable Architecture	Scalable architecture	Evaluation metrics
4.	Availability	Use of algorithms	Real time captioning, image recognition, sign recognition
5.	Performance	Improves performance of the model.	CNN, ML, RNN