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

Date	15 October 2022
Team ID	PNT2022TMID10881
Project Name	Real Time Communication Using AI for Specially abled.
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2
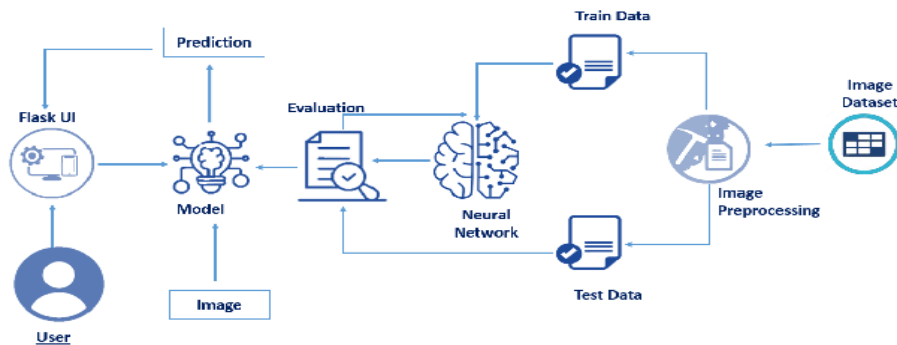
Guidelines:

1.   Include all the processes (As an application logic / Technology Block)

2.   Provide infrastructural demarcation (Local / Cloud)

3.   Indicate external interfaces (third party API's etc.)

4.   Indicate Data Storage components / services

5.   Indicate interface to machine learning models (if applicable)

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	By Web UI, the user interacts with the web application and fulfil the user requirements with good user experience	HTML, CSS, JavaScript etc.
2.	Application Logic-1	User register themselves and once logged in, given with various features.	Java / Python
3.	Application Logic-2	deaf and dumb people want to communicate with people , by contacting using the web	IBM Watson STT service
4.	Application Logic-3	This web enables deaf and dumb people to convey their information using signs which get converted to human-understandable language and speech is given as output.	IBM Watson Assistant
5.	Database	SQL Data Type	MySQL
6.	Cloud Database	-	-
7.	File Storage	File storage requirements	Other Storage Service or Local File system
8.	External API-1	To validate the user	UserId API
9.	External API-2	-	-
10.	Machine Learning Model	The images which will be used for building the model, Image pre-processing includes zooming, shearing, flipping to increase the robustness of the model after it is built	Object Recognition Model
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System Local Server Configuration:	Local

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used: Angular JS	Technology of Opensource framework JAVASCRIPT and PYTHON
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc. SHA-256 to protect user details.	SHA-256
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier) This improves scalability, because application servers can be deployed on many machines. The database does make longer connections with every user	Presentation Layer – React JS (HTML, CSS , JS) Application Layer – Flask (Python) Data
4.	Availability	Justify the availability of application (use of load balancers, lets you evenly distribute network traffic to prevent failure caused by overloading a particular resource. This strategy improves the performance and availability of applications, websites, databases, and other computing resources)	-
5.	Performance	Design the application carefully to be component based and encapsulated. This can help in creating a scalable application providing flexibility in deployment and making it possible to partition the application and substitute other component implementations during deployment..	-