

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

Date	03 October 2022
Team ID	PNT2022TMID08130
Project Name	Real-Time Communication System Powered by 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

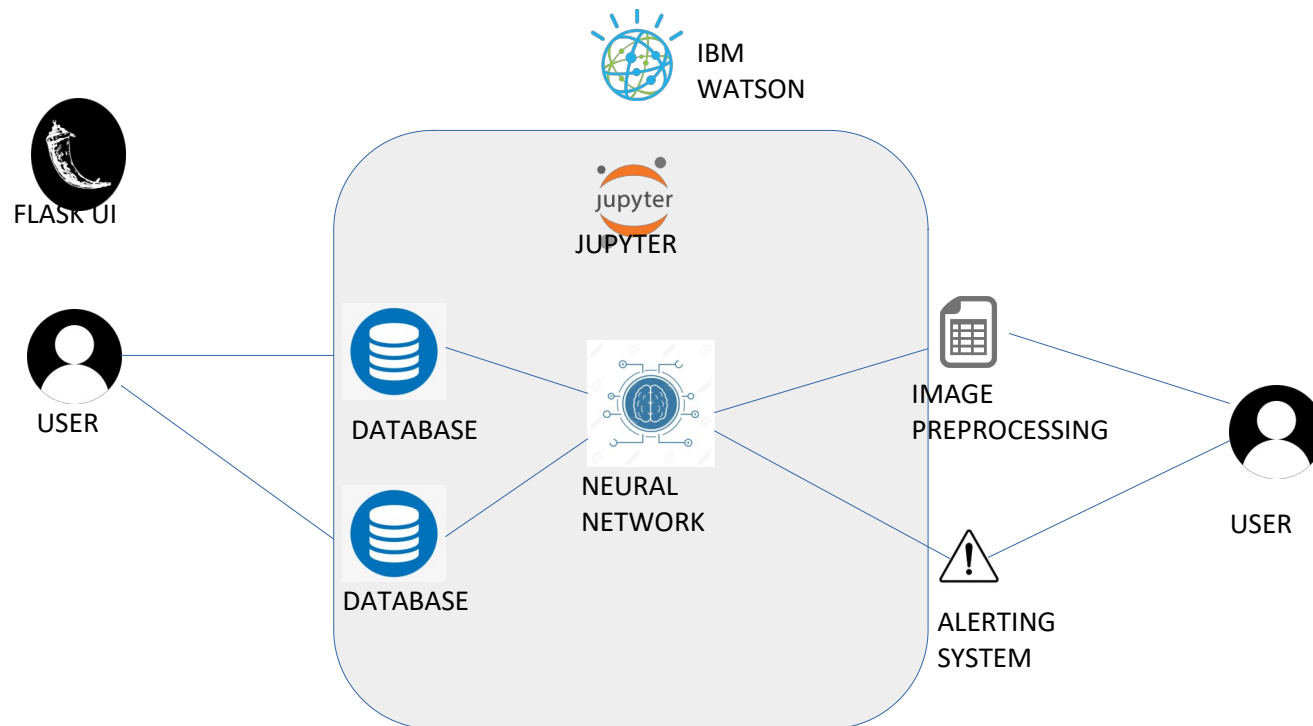


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Mobile App	Python
2.	Application Logic-1	User login and signs through the application	Jupyter python
3.	Application Logic-2	Detecting the sign language	IBM Watson
4.	Application Logic-3	Converts sign language into text or speech	IBM Watson Assistant
5.	Cloud Database	Database Service on Cloud	IBM Cloudant
6.	File Storage	Files are stored in the cloud	IBM Block Storage or Other Storage Service or Local Filesystem
7.	External API-1	Purpose of External API used in the application	IBM Weather API
8.	Deep learning Model	To recognition of sign language and convert to text format	Object Recognition Model
9.	Infrastructure (Server / Cloud)	IBM cloud configuration is a centralized feature-management and configuration service on IBM cloud.	IBM Cloud Foundry

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	There are no open-source frameworks in this application.	Python
2.	Security Implementations	Blockchain technology is used for security implementations	Blockchain
3.	Scalable Architecture	User can communicate with sign language recognition	IBM cloud
4.	Availability	Users are provided with sign language learning source and Assistant like search engine	IBM Watson assistant
5.	Performance	Convolutional Neural Network algorithm is used to produce output with high accuracy	CNN