

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

Date	03October 2022
Team ID	PNT202245340
Project Name	Project – 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

Example: Order processing during pandemics for offline mode

Reference: <https://developer.ibm.com/patterns/ai-powered-backend-system-for-order-processing-during-pandemics/>

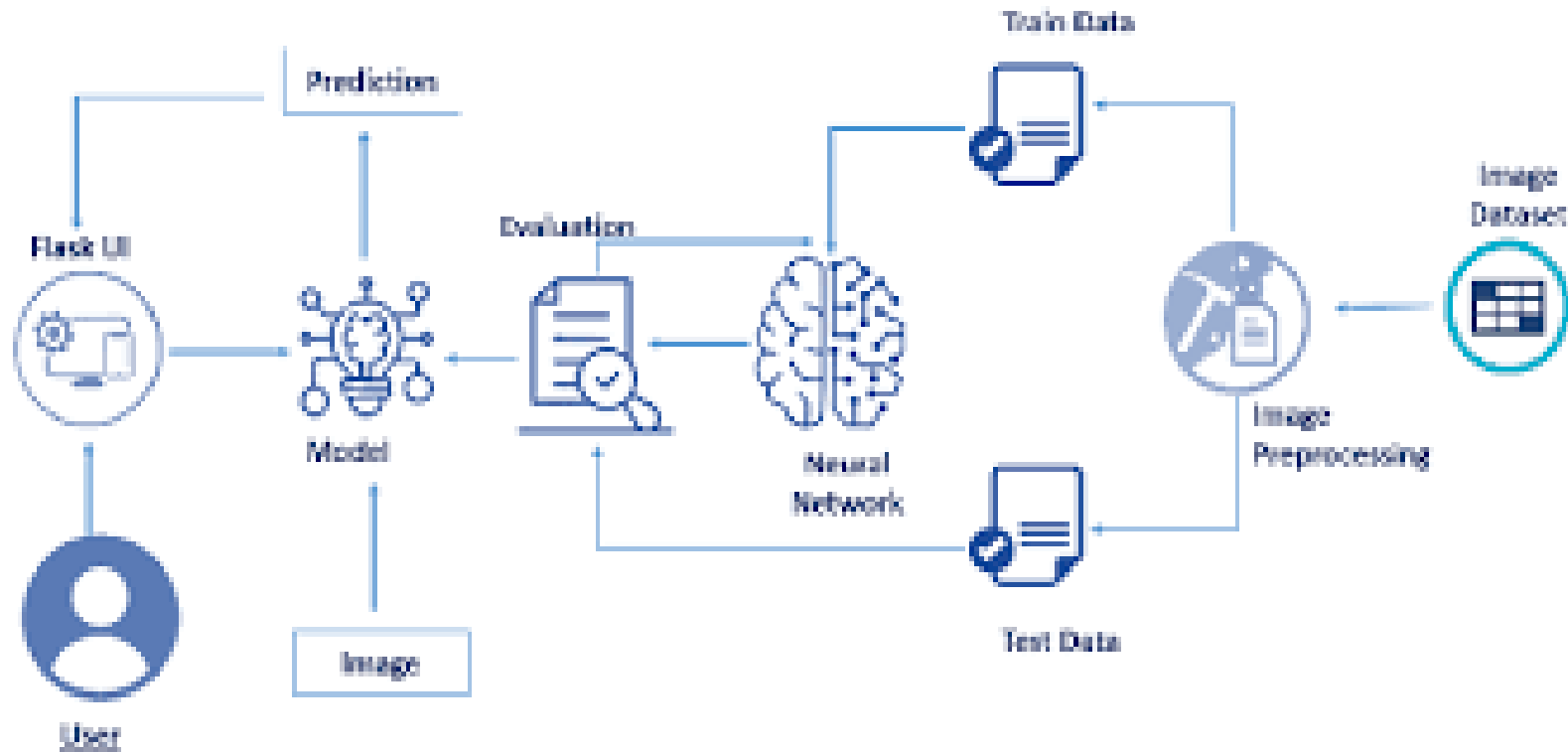


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web UI	HTML, CSS, JavaScript
2.	Application Logic-1	Import all the library files required for data pre-processing	Python

3.	Application Logic-2	Build the CNN model	Python
4.	Application Logic-3	Login into Jupiter notebook	Online or application download
5.	Database	Load and store the data set and code	System storage
6.	Cloud Database	Database Service on cloud	IBM cloud
7.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
8.	Machine Learning Model	Used to analyze visual images, image processing, video capture and analysis including features like face detection and hand sign detection.	CNN, Anaconda
9.	Infrastructure (Server / Cloud)	Train the dataset and model using IBM cloud.	IBM cloud.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Application development , data pre-processing	Pycharm , anaconda navigator
2.	Security Implementations	Produces an translation output when a speech or sign language is given as an output.	Anaconda
3.	Scalable Architecture	Easy to use Can be able to respond quickly. Able to produce absolute translation. Should consume less data.	Anaconda
4.	Availability	Nowadays Deaf Mute Communication Interpreter, under wearable communication method, there are Glove based system, keypad method and Handicom Touchscreen.	Artificial Intelligence
5.	Performance	Rapid conversion from sign language to text or text to sign language.	CNN Model

References:

<https://c4model.com/>

<https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/>

<https://www.ibm.com/cloud/architecture>

<https://aws.amazon.com/architecture>

<https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d>