VSB ENGINEERING COLLEGE, KARUR

Computer Science and Engineering

IBM NALAIYA THIRAN

Project Design Phase-II

Technology Stack (Architecture & Stack)

Date	15 October 2022
Team ID	PNT2022TMID33317
Project Name	Project – Realtime 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.

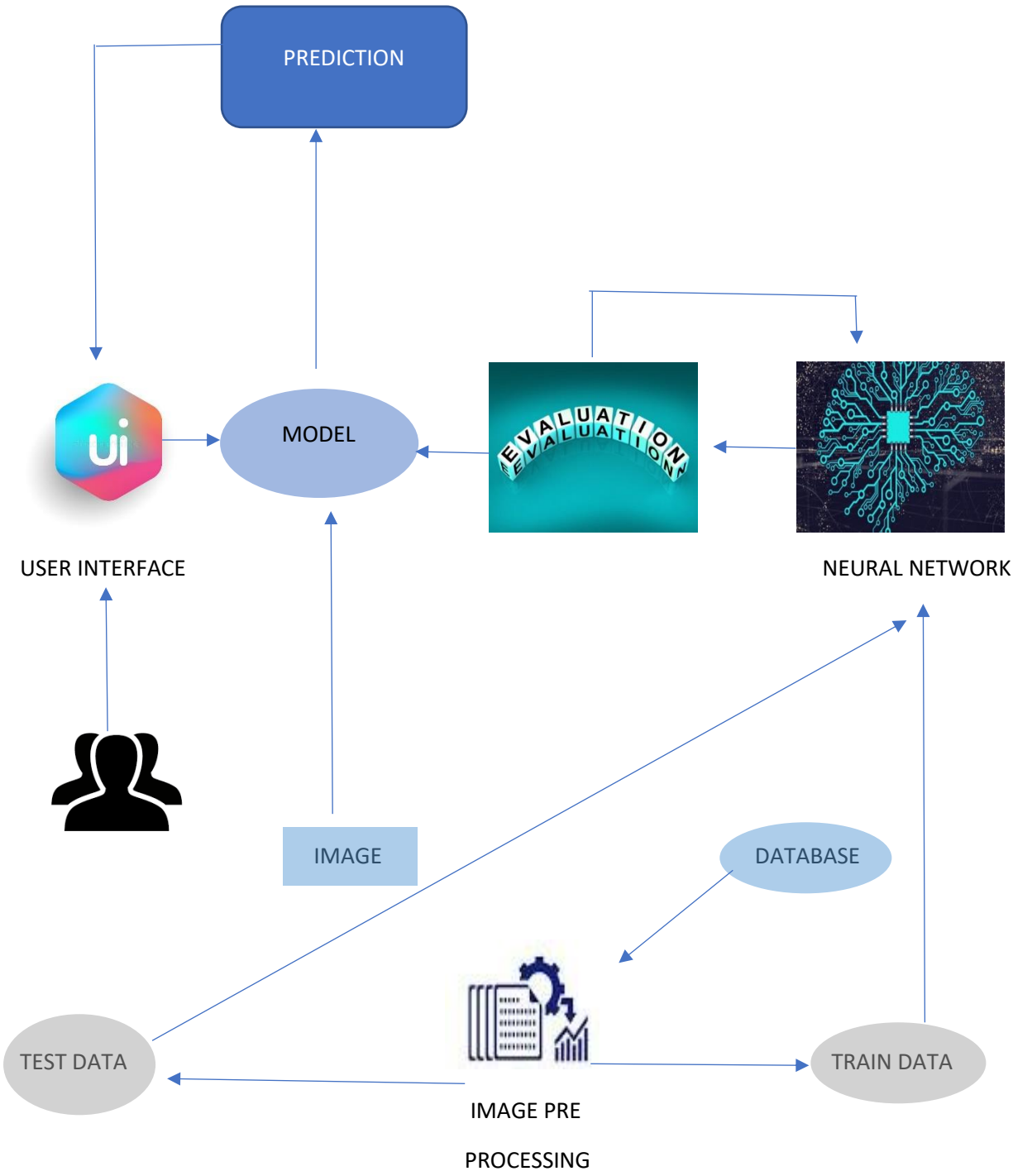
PREDICTION
MODEL
USER INTERFACE
NEURAL NETWORK
IMAGE
DATABASE
TEST DATA
TRAIN DATA
IMAGE PRE
PROCESSING

Table 1:

Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	User interface is the point of human computer interaction and communication Device	HTML, CSS, JavaScript / Angular Js / React Js etc.
2.	Application Logic-1	Convert speech into sign language	Java / Python
3.	Application Logic-2	Convert sign language to speech	IBM Watson STT service
4.	Application Logic-3	Convert speech to Readable content	IBM Watson Assistant
5.	Database	Data Type, Configurations etc.	MySQL, NoSQL, etc.
6.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
7.	File Storage	Method used to organize and store data on Hard drive	IBM Block Storage or Other Storage Service or Local Filesystem
8.	External API	Defines the communication Between normal and deaf people	IBM Weather API, etc.
9.	Machine Learning Model	Training	Object Recognition Model, etc.

Table 2:

Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	It is a open source which enables rapid development of secure and maintainable websites.	Bootstrap, Spring boot, React JS etc..
2.	Security Implementations	Technical tools and techniques that are used to implement security services	SHA-256, Encryptions, IAM Controls, OWASP etc.
3.	Scalable Architecture	Supports High Workloads without any Fundamental changes	Devops
4.	Availability	Check Whether the application is working properly.	Conferencing Technology
5.	Performance	Indicates how that the app is functioning and how the app is response to the end user	Natural Language Processing(NLP)