Project DesignPhase-
IITechnologyStack(Architecture&Stack)

Date	14 October 2022
TeamID	PNT2022TMID50481
ProjectName	Project–RealTimeCommunicationSystemPoweredbyAIforSpeciallyAbled
MaximumMarks	4Marks

TechnicalArchitecture:

TheDeliverable shall include the architectural diagram asbelow and the information as per th etable1 &table2

Example: Specially abled person convey their message to others
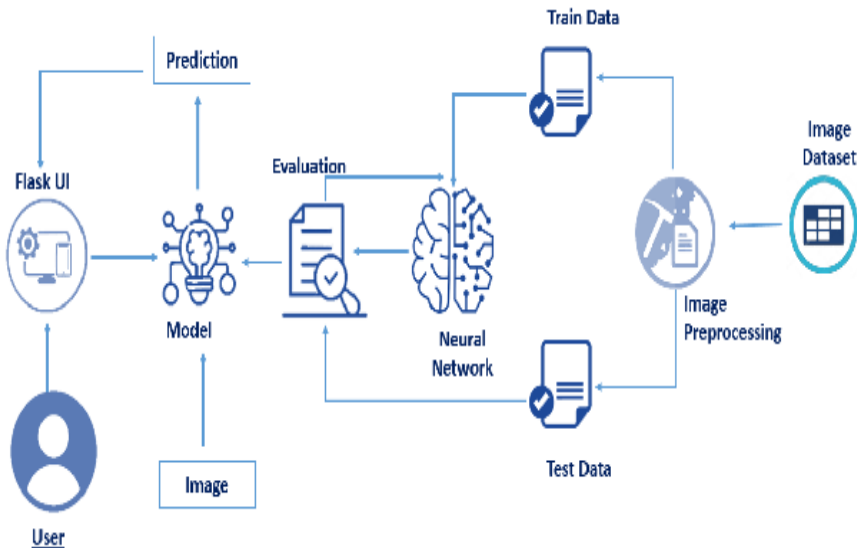
Guidelines:

1. Includeall theprocesses(Asanapplicationlogic/TechnologyBlock)
2. Provideinfrastructuraldemarcation(Local/Cloud)
3. Indicateexternalinterfaces(thirdparty API'setc.)
4. IndicateDataStoragecomponents/services
5. Indicateinterfacetomachinelearningmodels(ifapplicable)

Table-1: Components &Technologies:

S. No	Component	Description	Technology
1.	User	Communication impediments of deaf or hearing-impaired people with other communities, responsible significantly to their social inclusion	AItechnology
2.	FlashUI	Flash's user interface constituents let you interact with the users that use your site and gather information.	Using thecloudit canbeexecuted
3.	Models	Support Vector Machine (SVM) is afterwards applied to classify our gesture image dataset.	MachineLearning
4.	ImagePrediction	Gesture can be completely observable and viewing A gesture from another point of view makes the forecasting.	ANN,CNN
5.	Image	Image processing Is used to made the image into signs by the neural network	ANN,CNN,OpenCV
6.	Speech	Speech translates the voice into image and sensitive neural play.	AI and machine learning methods like deep learning and neural networks
7.	Evaluatedata	Aims to estimate the generalization accuracy of a model on future (unseen/out-of-sample) data.	
8.	Unstructureddata	P unstructured data is a conglomeration of many Varied types of data that are stored in their native formats	Natural Language Processing(NLP)
9.	Structureddata	Typically categorized as quantitative data—is highly organized and easily decipherable by machine learning algorithms	Machine language and artificial intelligence tools
10.	Neuralnetwork	The same convolutional neural network architecture was used for both, the top view and the bottom view models, the only difference is the number of output units	AI technology
11.	Dataset	First prototype of this system is was used a dataset Of 24 static signs from the Panamanian Manual Alphabet.	AI technology

Table-2: Application Characteristics:

S. No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Robots and other tools provide home-based Care and other assistance, allowing people with affliction to live independently	Artificial intelligence like robots and software systems
2.	Security Implementations	Set the inclusion and exclusion criteria, Report the results in the survey	Artificial intelligence
3.	Scalable Architecture	The improvement in the specially abled persons inter action with the environments	Artificial intelligence
4.	Availability	Technology solutions that mimic humans sand use logic from playing chess to solving equations and Machine learning is bone of the technologies	Artificial intelligence
5.	Performance	Enables people with disabilities to step into a world where their difficulties are understood and takenintoaccount	Artificial intelligence