Project Design Phase-II

Technology Stack (Architecture & Stack)

Date	05 Nov 2022
Team ID	PNT2022TMID41036
Project Name	Real-Time Communication System Powered by AI for Specially Abled
Maximum marks	4 Marks

Technical Architecture:

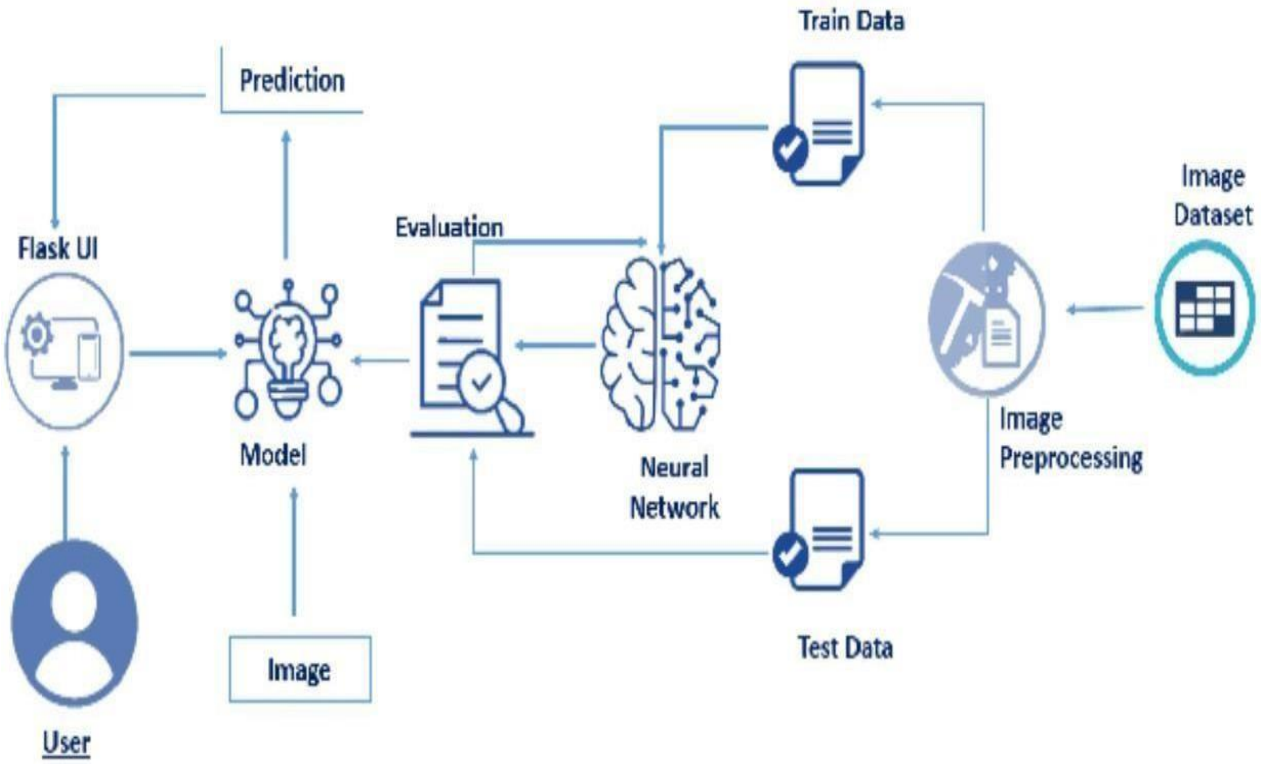

Table -1: Components & Technologies

S.NO	Component	Description	Technology
1.	User Interface	Allows the user to enter the input and recognize the input using GUI.	HTML,CSS, JavaScript
2.	Digit Prediction	Here the digit given as a input is predicted.	Keras,CNN.
3.	Representation	Skeleton, counters, pixels or others.	Java / Python
4.	Segmentation	Task of clustering parts of an image together that belong to the same object class.	Convolution neural networks& super pixels.
5.	Machine Learning Model	Purpose of Machine Learning Model is to train and test the data and predict the user input.	Classification.
6.	Infrastructure	Application Deployment on Local System / Cloud LocalServer Configuration: Cloud Server Configuration :.	Local, Cloud Foundry
7.	Neural network	Automatically infer rules for recognizing handwritten digits.	Convolution neural network

Table – 2: Application Characteristics:

S.NO	Characteristics	Description	Technology
1.	Pre -processing	Data pre -processing is a process of preparing the raw data and making it suitable for a machine learning model.	Real time online handwritten character recognition system, based on an ensemble of neural networks.
2.	Open-Source Frameworks	Enables developers to develop complex code and web application quickly.	Open source -Jupiter anaconda navigator, flask framework.
3.	Data set	It Contains 60,000 training images.	MNIST
4.	Security Implementations	After predicting the data, we don't store any data so we can't manipulate it in future.	Encryption
5.	Performance	Work on the Python deep learning project to build a hand written recognition app using MNIST data set convolution neural network and a GUI.	Convolution Neural Networks.