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

Date	16 October 2022
Team ID	PNT2022TMID26790
Project Name	Project – Real Time Communication System Powered by AI For Specially Abled.

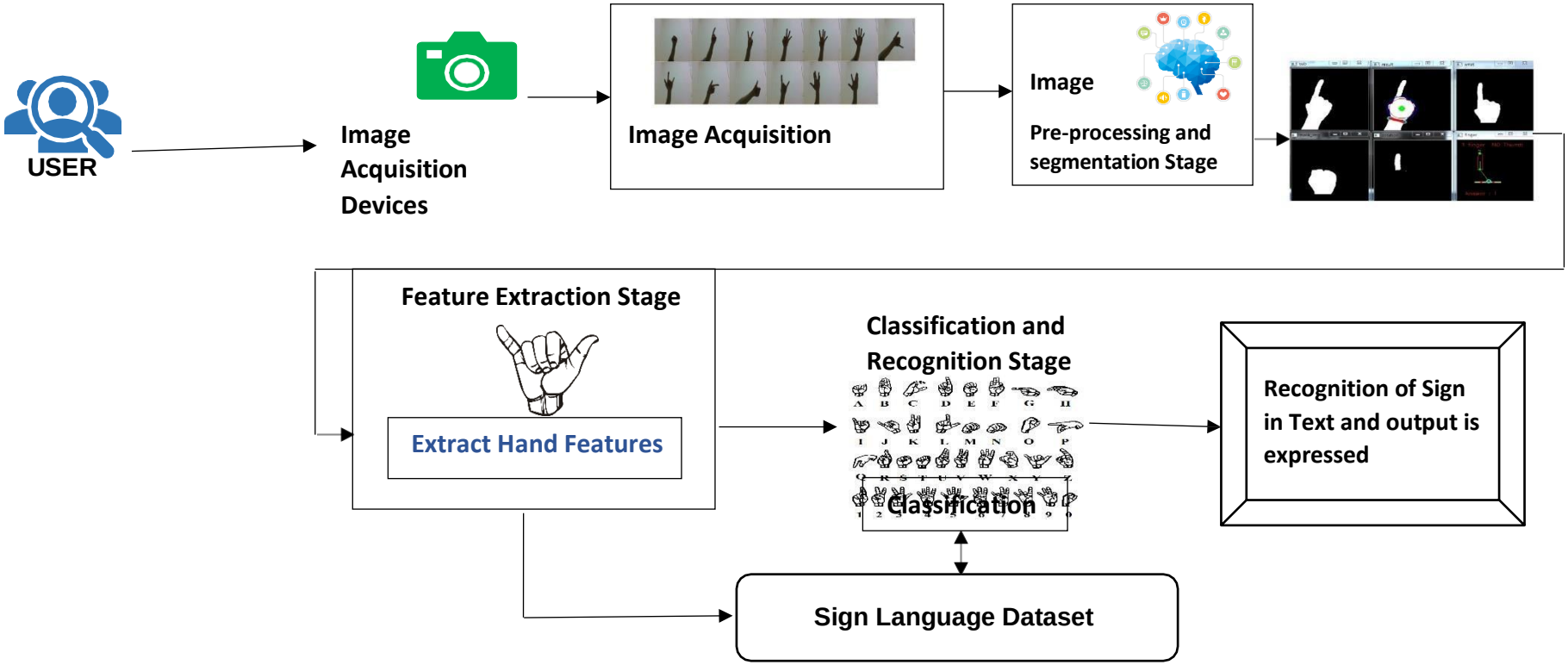

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Customer have to login through their respective website or phone number. Then interaction will happen with the User interface.	javascript, CSS,HTML
2.	Application Logic-1	It requires various types libraries, frameworks to develop the project	Java / Python
3.	Application Logic-2	Helps to converting the human gestures/actions into written words.	Machine learning
4.	Application Logic-3	Provides helpful,feasible answers after recognising the human gestures.	ANN,CNN
5.	Database	Data could be numbers or words.	MySQL, Rational database
6.	Cloud Database	Providing customer to use host database without buying additional hardware..	Deep learning and neural networks
7.	File Storage	File storage could be fast, reliable and flexible..	Local file system
8.	External API-1	Used to access the information in the cloud	Weather API
9.	External API-2	Used to access the information for data driven decision making...	Aadhar API
10.	Machine Learning Model	Machine learning interact with various algorithms that are required for implementation.	Image acquisation
11.	Infrastructure (Server / Cloud)	Application deployment on local system /local cloud server configuration. Install the windows version and execute the installer..	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	The framework which are used.	Tensor flow, Theano, RNN, PyTorch
2.	Security Implementations	Security controls which can implemented by using firewall..	Firewall and some security related softwares..
3.	Scalable Architecture	The architecture will be scalable (Micro services).	Data, models, speed and consistency..
4.	Availability	The availablity of application (use of load balancers, distributed servers etc)	Image recognition, sign/gestures recognition, text recognition & real time captioning..
5.	Performance	Design aspects for the performance of application (number of requests per second, use of cache etc..,	Using Convolutional neural network, maching learning for conversation and improve the sensivity of the performance..