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

Date	13 October 2022
Team ID	PNT2022TMID17255
Project Name	Project –Real time communication using AI for specially abled
Maximum Marks	4 Marks

Technical Architecture:

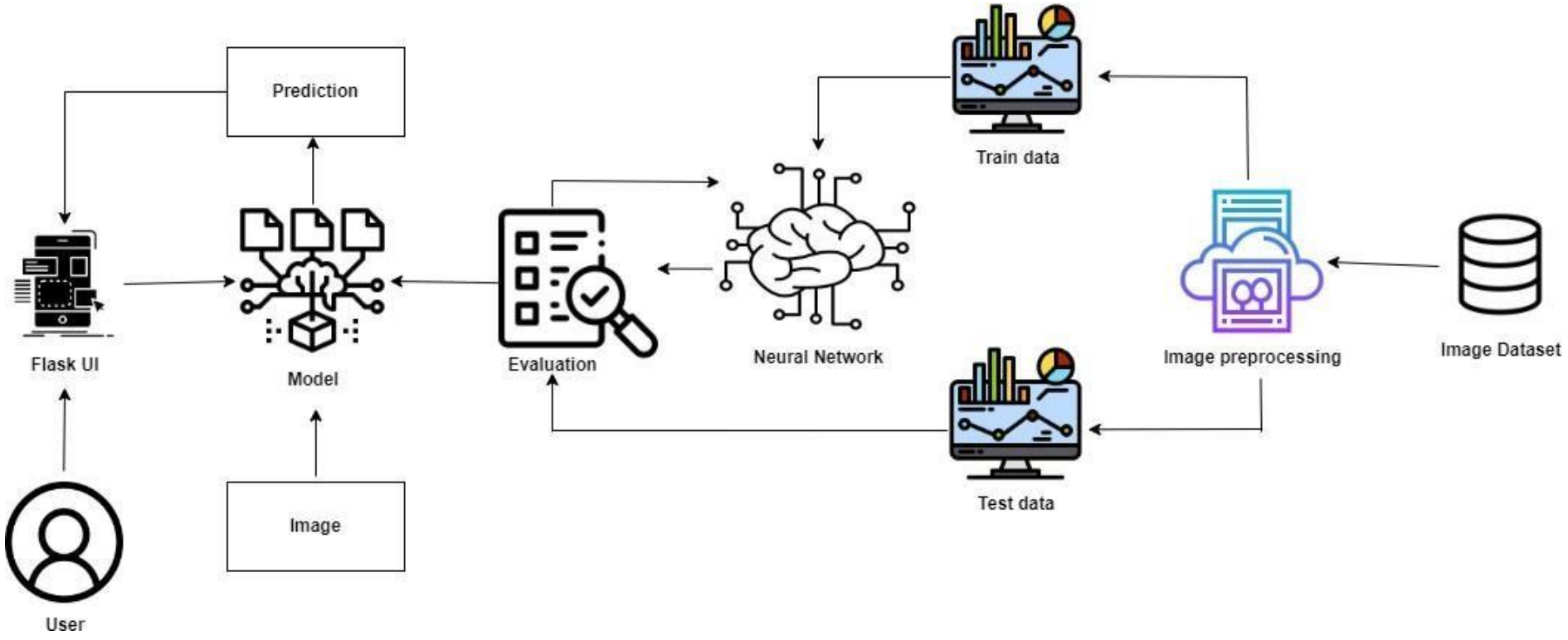

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	User visits the website and get redirected to the application by clicking an button .	HTML, CSS, JavaScript.
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 recognizing 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 should be highly flexible, scalable and effective ,fast ,reliable.	LocalFilesystem
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 frameworks used in the project are	Tensor flow, Theano, RNN, PyTorch
2.	Security Implementations	the security / access controls are implemented using firewalls etc.	Firewall and other security related softwares.
3.	Scalable Architecture	the scalability of architecture (3 – tier, Micro-services)	Data , models, operate at size, speed , consistency and complexity
4.	Availability	the availability of application (e.g. use of load balancers, distributed servers etc.)	Image and facial recognition, speech recognition and real time captioning.
5.	Performance	Design aspects for the performance of the application (number of requests per second, use of Cache, use of CDN's) etc.	Full and effective participation , equality of opportunity, accessibility, using machine learning for communication.