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

Date	31 October 2022
Team ID	PNT2022TMID39216
Project Name	Real time communication using AI for specially abled
Maximum Marks	4 Marks

Technical Architecture:

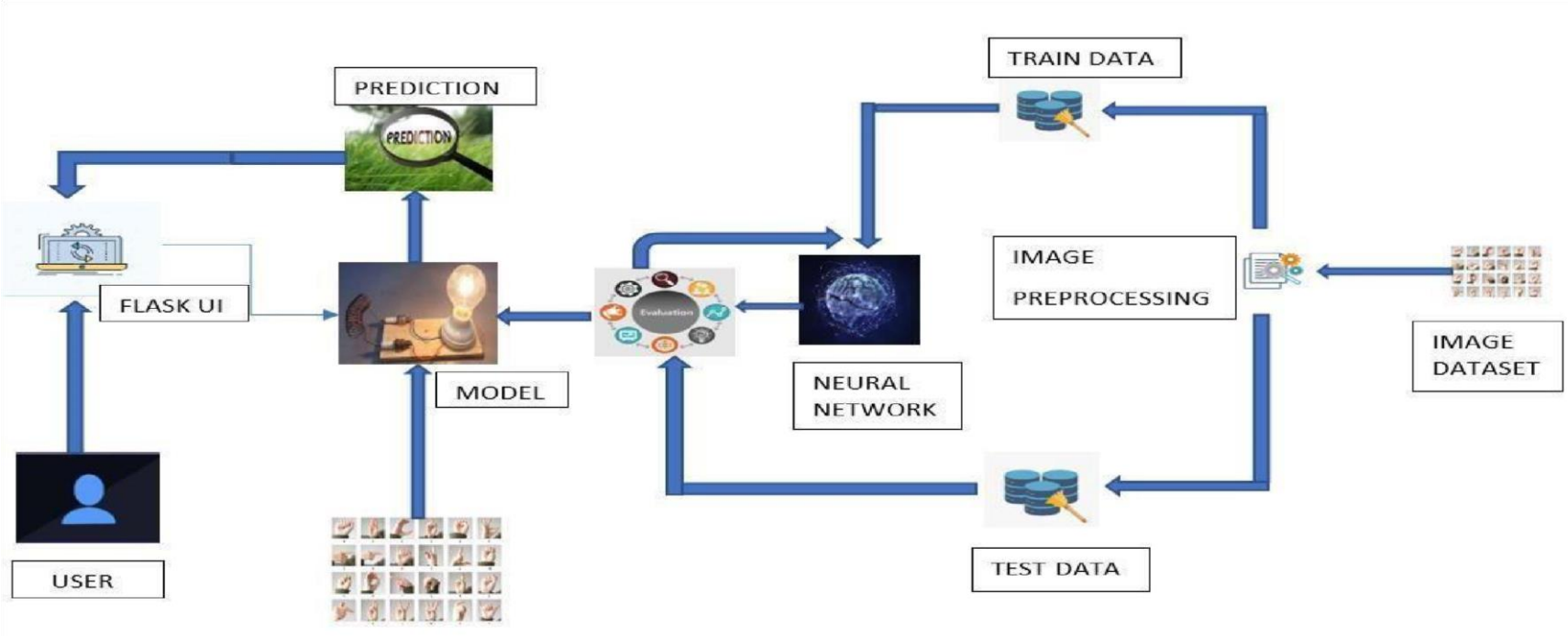

Table-1 : Components & Technologies:

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S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g., Web UI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript / Angular Js React Js etc.
2.	Application Logic-1	It deals with variety of frameworks, libraries and supports required to develop the project	Java / Python
3.	Application Logic-2	Helps in converting human voice into written words, in simple it is used to convert speech to text.	IBM Watson STT service
4.	Application Logic-3	Provides fast, consistent and accurate answers during the execution phase of the project	IBM Watson Assistant
5.	Database	It can be numerical, categorical or time-series data	MySQL, NoSQL, etc.
6.	Cloud Database	Enables the user to use host database without buying the additional hardware	IBM DB2, IBM Cloudant etc.
7.	File Storage	File storage should be highly flexible, scalable and effective	IBM Block Storage or Other Storage Service or Local Filesystem
8.	External API-1	Used to access the information in the cloud	IBM Weather API, etc.
9.	External API-2	Used to access the information for data driven decision making	Aadhar API, etc.
10.	Machine Learning Model	Machine Learning Model deals with various algorithms that are needed for the implementation	Real time communication using AI for specially abled
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Install the windows version and execute the installer Select APPACHE to install web server	Local, Cloud Foundry, Kubernetes, etc.
		Cloud Server Configuration: This server deals with the additional storage	

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	The frameworks used are	Tensor flow, Theano, RNN, PyTorch, Caffle 2
2.	Security Implementations	the security / access controls implemented, use of firewalls etc.	Identify, Prevent and Respond
3.	Scalable Architecture	the scalability of architecture (3 – tier, Microservices)	Data, models, operate at size, speed and complexity
4.	Availability	the availability of application (e.g. use of load balancers, distributed servers etc.)	Image and facial recognition, lip reading, text summarization, real time captioning
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Full and effective participation, equality of opportunity, accessibility