

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

| | |
|---------------|---|
| Date | 14 October 2022 |
| Team ID | PNT2022TMID08443 |
| Project Name | Real-Time Communication System Powered By AI For Specially Abled |
| Maximum Marks | 4 Marks |

Technical Architecture:

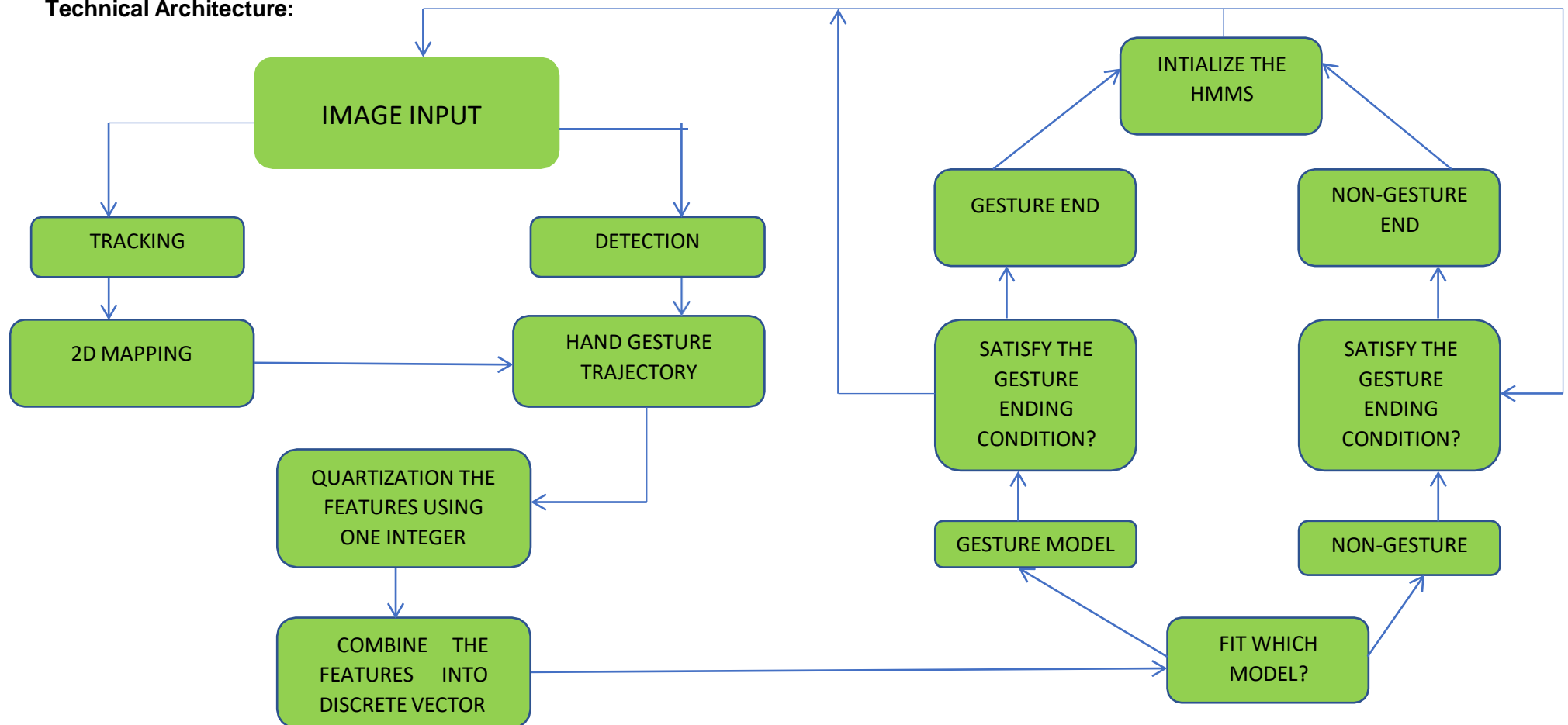


Table-1 : Components & Technologies:

| S.No | Component | Description | Technology |
|------|---------------------------------|---|--|
| 1. | User Interface | Interact with content or software running on a remote server through a web browser. e.g. Web UI, Mobile App, Chatbot etc. | HTML, CSS, JavaScript / Angular Js / React Js etc. |
| 2. | Application Logic-1 | Speech into sign language | Java / Python |
| 3. | Application Logic-2 | Speech to readable language | IBM Watson Assistant |
| 4. | Application Logic-3 | Sign language to speech | IBM Watson STT Service |
| 5. | Database | Data Type, Configurations etc. | MySQL |
| 6. | Cloud Database | Provides access to a database without requiring the setup of physical hardware, the installation of software or the need to configure the database. | IBM DB2, IBM Cloudant etc. |
| 7. | File Storage | It stores data in a hierarchical structure. The data is saved in files and folders, and presented to both the system storing it and the system retrieving it in the same format. | IBM Block Storage or Other Storage Service or Local Filesystem |
| 8. | External API | An external or open API is an API designed for access by a larger population as well as web developers. | IBM Weather API, etc. |
| 9. | Machine Learning Model | A machine learning model is a file that has been trained to recognize certain types of patterns. | Object Recognition Model, etc. |
| 10. | Infrastructure (Server / Cloud) | Application Deployment on Local System / Cloud | Local, Cloud Foundry, |

| | | | |
|--|--|---|------------------|
| | | <p>A server configuration defines a specific database as the repository for its data.</p> <p>Local Server Configuration: Serves a client within the local network or LAN.</p> <p>Cloud Server Configuration: Process of setting hardware and software details for elements of a cloud environment to ensure that they can interoperate and communicate.</p> | Kubernetes, etc. |
|--|--|---|------------------|

Table-2: Application Characteristics:

| S.No | Characteristics | Description | Technology |
|------|--------------------------|---|--|
| 1. | Open-Source Frameworks | It is a open-source which enables rapid development of secure and maintainable websites | Django |
| 2. | Security Implementations | <p>Technical tools and techniques that are used to implement security services.</p> <p>A mechanism might operate by itself, or with others, to provide a particular service</p> | SHA-256, Encryptions, IAM Controls, OWASP etc. |
| 3. | Scalable Architecture | Supports higher workloads without any fundamental changes to it. | Devops |

| S.No | Characteristics | Description | Technology |
|-------------|------------------------|---|-----------------------------|
| 4. | Availability | Measure used to evaluate whether an application is functioning properly and usable to meet the requirements of an individual or business. | Conferencing Technology |
| 5. | Performance | Indicates how the app is functioning and how responsive the app is to the end-user. | Natural Language Processing |