**REAL-TIME COMMUNICATION SYSTEM POWERED BY AI FOR SPECIALLY ABLED**

**ARCHITECTURE:**

Upload Crop dataset

Train the alphabets with sign Postures

CNN Algorithm

Finger Postures Tracking

Testing phase

Capturing with the camera

Match with the training Gestures

Classify the Figure Gestures

**COMPONENTS & TECHNOLOGIES**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No** | **Component** | **Description** | **Technology** |
|  | User Interface | Web UI | HTML, CSS, JavaScript |
|  | Application Logic-1 | Logic for a process in the application | Python |
|  | Application Logic-2 | Logic for a process in the application |  |
|  | Application Logic-3 | Logic for a process in the application |  |
|  | Database | Data Type, Configurations etc. | MySQL |
|  | Cloud Database | Database Service on Cloud | Local host |
|  | File Storage | File storage requirements | Local host |
|  | External API-1 | Purpose of External API used in the application | - |
|  | External API-2 | Purpose of External API used in the application | - |
|  | Machine Learning Model | Purpose of Machine Learning Model | - |
|  | Infrastructure (Server / Cloud) | Application Deployment on Local System / Cloud  Local Server Configuration:  Cloud Server Configuration : | Local Server Configuration |

**APPLICATION CHARACTERISTICS**

| **S.No** | **Characteristics** | **Description** | **Technology** |
| --- | --- | --- | --- |
|  | Open-Source Frameworks | List the open-source frameworks used | PYCHARM |
|  | Security Implementations | List all the security / access controls implemented, use of firewalls etc. | - |
|  | Scalable Architecture | Justify the scalability of architecture (3 – tier, Micro-services) | Able to respond the changes in an application |
|  | Availability | Justify the availability of application (e.g. use of load balancers, distributed servers etc.) | The system must always be functional |
|  | Performance | Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN’s) etc. | Takes no longer time to response |