

Project Design Phase-II
Solution Requirements (Functional & Non-functional)

| | |
|---------------|---|
| Team ID | PNT2022TMID50449 |
| Project Name | Project - Real-Time Communication System Powered by AI for Specially Abled |
| Maximum Marks | 4 Marks |

Functional Requirements:

Following are the functional requirements of the proposed solution.

| FR No. | Functional Requirement (Epic) | Sub Requirement (Story / Sub-Task) |
|--------|-------------------------------|--|
| FR-1 | User Registration | Registration through Form Registration through Gmail |
| FR-2 | User Confirmation | Confirmation via Email Confirmation via OTP |
| FR-3 | User Login | Login through Form Login through Gmail |
| FR-4 | Image Upload | Image Upload via Drag & Drop Image Upload by choosing from local file subsystem |
| FR-5 | Text Entry | Text Entry by Copy-Paste Text Entry by Typing |
| FR-6 | Conversion | Sign-Language to Speech Conversion Text to Sign-Language Conversion |
| FR-7 | Activity Log | View list of active users View log of translations performed |

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

| FR No. | Non-Functional Requirement | Description |
|--------|----------------------------|---|
| NFR-1 | Usability | The application can be used by clients without prior knowledge of machine-learning algorithms. Basic knowledge of text-entry and file directory subsystem is sufficient |
| NFR-2 | Security | Access is provided only to registered users, either through a username-password pair or via their Gmail account |
| NFR-3 | Reliability | The application has an extremely low failure rate / downtime and has a clear, predictable flow of operations |
| NFR-4 | Performance | The application provides accurate translations from sign-language to speech as well as from text-to-sign language |

| | | |
|-------|---------------------|---|
| NFR-5 | Availability | Clients can use the application to perform conversions provided they have a stable Internet connection |
| NFR-6 | Scalability | The application seamlessly and efficiently handles a growing number of clients / users without any significant reduction in performance |