**Project Design Phase-II**

**Solution Requirements (Functional & Non-functional)**

|  |  |
| --- | --- |
| Date | 7 November 2022 |
| Team ID | PNT2022TMID13400 |
| Project Name | A Novel Method for Handwritten Digit Recognition System |
| 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  Registration through LinkedIN |
| FR-2 | User Confirmation | Confirmation via Email  Confirmation via OTP |
| FR-3 | Upload image | Image upload via files  Image upload via folders  Image upload via drive  Image upload via web  Image upload via scan/camera |
| FR-4 | Spelling support | Identifies handwriting of different styles and fonts  Spelling check |
| FR-5 | Translation | Handwritten digits from the image are extracted.  Conversion of handwritten digits into machine readable form |
| FR-6 | Log out | Log out / sign out. |

**Non-functional Requirements:**

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

|  |  |  |
| --- | --- | --- |
| **FR No.** | **Non-Functional Requirement** | **Description** |
| NFR-1 | **Usability** | The proposed system gives good results for images that contain handwritten text written in different styles, different size and alignment with varying background |
| NFR-2 | **Security** | Only authorized people can access the system data and modify the database. |
| NFR-3 | **Reliability** | The Database is frequently updated with handwriting of different styles and size and will rollback when any update fails. |
| NFR-4 | **Performance** | The proposed system is advantageous as it uses  fewer features to train the neural network, which results in faster convergence. |
| NFR-5 | **Availability** | The system functionality and services are available for use with all operations. |
| NFR-6 | **Scalability** | The website traffic limit must be scalable enough to support 2 lakhs users at a time |