

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

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| Date | 15 October 2022 |
| Team ID | PNT2022TMID07046 |
| 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 | The project basically converts the handwritten digit into digital form | The user is first asked to draw a number on the canvas, and the model that is built is then utilized to compare the data and provide an output in digitalized form. |
| FR-2 | Display the recognized handwritten digit to the user | Recognizing the handwritten digit and displaying. |
| FR-3 | Import dataset file directly to the program from a command that will download the dataset from its website. Save the dataset file in the same directory as the program | Installing packages and applications. |
| FR-4 | Build a Neural Network with a number of nodes in the input layer equal to the number of pixels in the arrays | Nil |
| FR-5 | Activating the Neural Network | Packages – Tensorflow |

Non-functional Requirements:

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

| FR No. | Non-Functional Requirement | Description |
|--------|----------------------------|---|
| NFR-1 | Usability | System design should be easily understood and user friendly to users. Furthermore, users of all skill levels of users should be able to navigate it without problems. |
| NFR-2 | Security | The system should automatically be able to authenticate all users with their unique username and password |
| NFR-3 | Performance | Should reduce the delay in information when hundreds of requests are given. |
| NFR-4 | Availability | Information is restricted to each users limited access |
| NFR-5 | Scalability | the system should be able to handle 10000 users accessing the site at the same time |