**Project Design Phase-II**

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

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| Date | 20 October 2022 |
| Team ID | PNT2022TMID31649 |
| 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.

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| **FR No.** | **Functional Requirement (Epic)** | **Sub Requirement (Story / Sub-Task)** |
| FR-1 | Model Creation | Get access the MNIST dataset |
| Analyse the dataset |
| Define a CNN model |
| Train and Test the Model |
| FR-2 | Application Development | Create a website to let the user  recognize handwritten digits. |
| Create a home page to upload  images |
| Create a result page to display  the results |
| Host the website to let the users  use it from anywhere |
| FR-3 | Input Image Upload | Let users upload images of  various formats. |
| Let users upload images of  various size |
| Prevent users from uploading  unsupported image formats |
| Pre-Process the image to use it  on the model |
| Create a database to store all  the input images |
| FR-4 | Display Results | Display the result from the  model |
| Display input image |
| Display accuracy the result |
| Display other possible  predictions with their respective  accuracy |

**Non-functional Requirements:**

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

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| **FR No.** | **Non-Functional Requirement** | **Description** |
| NFR-1 | **Usability** | The application must be usable  in all devices |
| NFR-2 | **Security** | The application must protect  user uploaded image |
| NFR-3 | **Reliability** | The application must give an  accurate result as much as  possible |
| NFR-4 | **Performance** | The application must be fast and  quick to load up |
| NFR-5 | **Availability** | The application must be  available to use all the time |
| NFR-6 | **Scalability** | The application must scale along  with the user base |