Project Design Phase-II

Solution Requirements (Functional & Non-functional)

Team ID	PNT2022TMID48440
Project Name	A Novel Method for Handwritten Digit Recognition System

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Sub Requirement (Story / Sub-Task)
FR-1	Image Data: Handwritten digit recognition alludes to a PC's ability to recognize human transcribed digits from different sources, for example, photos, reports, contact screens, and so on, and classify them into ten laid out orders (0-9). In the realm of deep learning, this has been the subject of endless examinations.
FR-2	Website: Web facilitating makes the code, illustrations, and different things that make up a site open on the web. A server has each site you've at any point visited. The kind of facilitating decides how much space is designated to a site on a server. Shared, devoted, VPS, and affiliate facilitating are the four fundamental assortments.
FR-3	Digit Classifier Model: To prepare a convolutional network to foresee the digit from a picture, utilize the MNIST information base of manually written digits. get the preparation and approval information first.
FR-4	Cloud: The cloud offers a scope of IT administrations, including virtual capacity, organizing, servers, information bases, and applications. In plain English, cloud computing is portrayed as a virtual stage that empowers limitless capacity and admittance to your information over the web.
FR-5	Modified National Institute of Standards and Technology dataset: The abbreviation MNIST stands for the MNIST dataset. It is a collection of 60,000 tiny square grayscale photographs, each measuring 28 by 28, comprising handwritten single digits between 0 and 9.

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	One of the extremely critical issues in design acknowledgment applications is the acknowledgment of written by hand characters. Applications for digit acknowledgment incorporate finishing up structures, handling bank checks, and arranging mail.
NFR-2	**Security**	The framework creates an exhaustive portrayal of the launch boundaries.
NFR-3	**Reliability**	The examples are utilized by the brain organization to reason rules for perusing written by hand digits consequently. Besides, the organization might more deeply study penmanship and subsequently upgrade its exactness by expanding the amount of preparing examples. Numerous techniques and algorithms, such as Deep Learning/CNN, SVM, Gaussian Naive Bayes, KNN, Decision Trees, Random Forests,etc., can be used to recognize handwritten numbers.
NFR-4	**Performance**	The web application is created to provide a smooth user experience and make clients satisfied with the digit recognition service.
NFR-5	**Availability**	The web application will be available for everyone who owns a smart device with internet connection 24/7
NFR-6	**Scalability**	Scalability of the web application depends on the server size and datasets provided to the web application.