

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

Date	03 October 2022
Team ID	PNT2022TMID37900
Project Name	Project-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	Core functionality	Recognize the human handwritten digits from different sources like images, papers, touch screens, etc, and classify them into 10 predefined classes (0-9)
FR-3	Access	Able to copy the recognised digits, Focus a part of the image manually.
FR-4	Network	The database has to be updated for training for more accuracy.

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	Recognising handwritten information such as reading postal addresses, bank check amounts, and forms.
NFR-2	Security	When the image is passed to recognise a particular area of digit(s), the image will not be stored at the backend.
NFR-3	Reliability	CNN has shown remarkable abilities in offline handwritten character recognition of Arabic language; handwritten Tamil character recognition; Telugu character recognition, handwritten Urdu text recognition, handwritten character recognition in Indic scripts [44] and Chinese handwritten text recognition.
NFR-4	Performance	Hyper-parameters are, namely, activation function, number of epochs, kernel size, learning rate, hidden units, hidden layers, etc. that are responsible for the performance of the system.
NFR-5	Availability	There is no maintenance time separately for the servers to be down or can be accessed offline also.
NFR-6	Scalability	System will be such that it is easy to change, update, or add features later on.

