Solution Requirements (Functional & Non-functional)

Team ID	PNT2022TMID35498
Project Name	A Novel Method for Handwritten Digit Recognition System

Functional Requirements

FR No.	Functional Requirement	Description
FR-1	Website	• A website having a login feature, where each user will have to register and then he/she will be able to login using his/her username and password.
FR-2	Upload Image	• Must be able to take the handwritten inputs in the form of the images. (JPG or PNG)
FR-3	Image correlation	• Image correlation is a technique used to recognize characters from images. Collecting data and prepare it for training and testing.
FR-4	Feature extraction	• Feature extraction is analyzing the images and deriving some characteristics from these images that identify each element.
FR-5	Output	• System should retrieve characters present in the image and display them to the user. • System must be able to display the accurate output in text format.

Non-functional Requirements

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	• Application for digit recognition include filling out forms, processing bank cheque , and sorting mail. • Should be easy to use for everyone.
NFR-2	Security	• As it will be used in the banking sector, it should be able to store the cheque details securely. • This will be done by authenticating the users using their username and password.
NFR-3	Reliability	• This software should work reliably for low resolution image and should not display any errors.
NFR-4	Performance	• The software should be responsive and provide output quickly even for complex handwriting.
NFR-5	Accuracy	• Optical Character Recognition (OCR) technology provides higher than 99% accuracy with typed characters in high- quality images. However, the diversity in human writing types, spacing differences, and inequalities of handwriting causes less accurate character recognition.
NFR-6	Scalability	• Large numbers of users can access the digits at any time without restrictions.