PROJECT DESIGN PHASE-II

SOLUTION REQUIREMENTS-FUNCTIONAL AND NON-FUNCTIONAL

Team ID	PNT2022TMID49379
Project Name	A Novel Method for Handwritten Digit Recognition System

FUNCITONAL REQUIREMENTS   Below mentioned are the functional requirements of the project

Functional Requirement No	REQUIREMENT
FR 1	Recognition of the digit given to the model in various forms of inputs such as photographs, documents, text screens etc. This has been the topic for countless studies in deep learning.
FR2	Website hosting makes a server host every server visited. Shared, dedicated, reseller and VPS are the four basic types of website hosting.
FR 3	The MNIST dataset is a 60,000 tiny square photograph collection of black and white images which comprising handwritten single digits between 0 and 9. The abbreviation for MNIST is Modified National Institute of Standards and Technology. It is used to train the model.
FR4	The training of a classifier model with the help of the data from the MNIST dataset to identify the input given from the user using various forms of input. It has to get trained and has to validate the data.
FR5	To make the application to be more flexible and scalable, we have to go for cloud services as having physical servers and storage is not appreciated. Hence to get access to unlimited storage and other resources we have to go for cloud service providers such as IBM, Google, Amazon etc.

NON-FUNCTIONAL REQUIREMENTS   Below mentioned are the non-functional requirements of the project

Functional Requirement No	REQUIREMENT
NFR 1	The model should be able to be used for variety of applications such as fill out forms, mail sorting, bank check processing etc. This improves the scalability of the product to one step further.
NFR 2	The model should be trained to give the best accurate output possible by the system. This is done by training the model with the vast types of datasets available as the accuracy of the systems with the increase in the training dataset. Algorithms such as Decision trees, random forests, KNN etc. can be used.
NFR 3	The model should be made able to be used in both offline/online mode if possible, as an option to the user where the user can switch between the modes. This is to improve the efficiency as they don't need to connect online every time if they use the system in the offline mode.
NFR 4	The product should not take much of the resources and should be efficient with the power and other resources of the user as it is an important factor in providing a good experience to the user.
NFR 5	If the system goes through secure information such as passwords, it sho uld make sure that no data will be leaking from the application's side as the data will be more sensitive and may lead to cyberattacks .The model should delete the data if is not required or it should encrypt the stored data with advanced encryption standards.