PROBLEM STATEMENT:

A Novel Method for Handwritten Digit Recognition System

- The handwritten digit recognition is the ability of computers to recognize human handwritten digits.

- It is a hard task for the machine because handwritten digits are not perfect and can be made with many different flavors.

- The handwritten digit recognition is the solution to this problem which uses the image of a digit and recognizes the digit present in the image.

- In different real-world scenarios like recognizing number plates of vehicles, processing bank cheque amounts, identifying numeric entries in forms filled up by hand (say tax forms) and so on , handwritten digit recognition by machine is used.

- The handwritten digits are not always of the same size, width, orientation as they differ from writing of person to person.

- The problem would be while classifying the digits due to the similarity between digits such as 1 and 7, 5 and 6, 3 and 8, 2 and 5, 2 and 7.

- This problem is faced more when many people write a single digit with a variety of different handwritings. The uniqueness and variety in the handwriting of different individuals also influence the formation and appearance of the digits.

- Nowadays the whole world is a shift in the digital world. They want everything in digital form, they not ready for manual work or any manual handwritten transaction.

- Also, they want to avoid the handwritten data.

- Depositing cash requires the physical presence of the depositor at the bank, and cashier needs to enroll the transaction into the system, which slows down the rate of money deposit and tellers activity.

- To overcome such issue, we are proposing to develop this system.

- A lot of information is available on paper, and processing of digital files is cheaper than processing traditional paper files.

- We will be reading images containing handwritten digits extracted from the database and try to recognize which digit is represented by that image.

- Handwriting recognition is the computer recognition of handwritten letters, numbers and characters.

- This process, which is very simple for a human, is difficult for computers.

- In other words, making sense of lines, symbols, and their combined shapes at the word level is difficult for computers.

- Handwriting features such as the presence of characters that are different in many languages, the fact that each person has different handwriting, and the presence of combined handwriting make it difficult for computer systems to recognize handwriting.

- This topic is not yet fully developed and it is an area of limited efficiency

- When this technology is developed, which is mainly used in tablet computers and for which there are already examples, it will be possible to store and organize any handwritten information in a digital environment without using a keyboard.