DEFINING THE PROBLEM (PROBLEM STATEMENTS)

A NOVEL METHOD FOR HANDWRITTEN DIGIT RECOGNITION SYSTEM

1. It is a hard task for the machine because handwritten digit is 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.

2. Handwritten digit recognition is the ability of a computer to recognize the human handwritten digits from different sources like images, papers, touch screens, etc., and classify them into 10 predefined classes (0-9). This has been a topic of boundless research in the field of deep learning.

3. Handwritten Digits are most of the times confusing, so, many important details such as zip code, account number, figure of cash and checks may go wrong. Automated detection helps in fixing this problem accurately.

4. The Handwritten digits are not always of the same size, width, orientation and justified to margins as they differ from writing of person to person, so the general 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, etc.

5. Lastly, the uniqueness and variety in the handwriting of different individuals also influence the formation and appearance of the digits. The concepts and algorithms of deep learning and machine learning can be variedly used to solve this problem effectively.

QUESTION	DESCRIPTION
Who Does the Problem Affect?	It affects from small occupations to big officials in understanding any important code in digits.
What Are the Boundaries of The Problem?	The Boundaries are Size, width, style, orientation of the written digit.
What is the Issue?	Early Accurate Detection of the Important Handwritten digits (Ex: Pin Code) may save huge losses which may be incurred if detected wrong.
When does the issue occur?	It occurs when the handwriting of the writer of the Digit is not understood by common man.
Where is the issue occurring?	It ranges from small occupations to big industries.
Why is it important that we fix the problem?	It improves detection of the digits and unreliable things such as Guesswork, Prediction can be overcome.

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