A NOVEL METHOD FOR HANDWRITTEN DIGIT REGONITION

ABSTRACT

- Handwriting recognition is one of the compelling research works going on because every individual in this world has their own style of writing. It is the capability of the computer to identify and understand handwritten digits or characters automatically. Because of the progress in the field of science and technology, everything is being digitalized to reduce human effort. Hence, there comes a need for handwritten digit recognition in many real-time applications. MNIST data set is widely used for this recognition process and it has 70000 handwritten digits. We use Artificial neural networks to train these images and build a deep learning model. Web application is created where the user can upload an image of a handwritten digit. this image is analyzed by the model and the detected result is returne on to UI.

LITERATURE SURVEY

An early notable attempt in the area of character recognition research is by Grimsdale in 1959. The origin of a great deal of research work in the early sixties kind of images ranges from a simple handwritten form based documents and documents containing colored and complex background and varied was based on an approach known as analysis-by-synthesis method suggested by Eden in 1968. The great Eden's work was that he formally proved that all handwritten characters are formed by a finite number o

schematic features, a point that was implicitly included in previous works. This notion was later used in all methods in syntactic (structural) approaches of character recognition. K. Gaurav, Bhatia P. K. [5] Et al, this paper deals with the various pre-processing techniques involved in the character recognition with different intensities. In this, different preprocessing techniques like skew detection and correction, image enhancement techniques of contrast stretching,   binarization, noise removal techniques, normalization and segmentation, morphological processing techniques are discussed. It was concluded that using a single technique for preprocessing, we can't completely process the image. However, even after applying all the said techniques might not possible to achieve the full accuracy in a preprocessing system.