A NOVEL METHOD FOR HANDWRITTEN DIGIT RECOGNITION SYSTEM

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Literature Survey

Abstract:

The main purpose of this paper is to recognize and predict the handwritten digits from zero to nine using Artificial Neural Network concepts. Normally every person has their own distinct handwriting hence recognizing the handwritten digits might not be easy to decipher. Real time applications for Handwritten Digit Recognition System is when certain digits written in cheque paper or an account number is written by a customer or user, the individual who checks the written digits might not be able to recognize the digits.Similarly in postal mail sorting the address written on the mail cannot be recognized by the individual who is sorting the mail. Handwritten digits are identified and analyzed by a model which is trained and tested with a dataset containing over 7000 different ways of handwritten digits .

What is it?:

Handwritten Digit Recognition is an improving research , which recognizes the written digits of every individual in this world using the dataset provided to Convolutional Neural Network and Artificial Intelligence concepts. When a handwritten digit is sent as an image to process in the software, the model which was trained and tested, analyzes and identifies the digits and shows the output to the user.

Design:

The whole project is done using Artificial intelligence and Deep Learning concepts,with Convolutional Neural Network as the main concept used to identify the different ways a digit is written and to recognize the input data which is given and retrieve the right output.Software that are used are Anaconda Navigator in which Jupiter notebook is used and IBM cloud,Tensor flow , Keras,IBM Watson Studio, IBM Cloudant DB and Python Flask concepts are also used.

Findings:

This project is highly useful in Bank cheque processing, Postal mail sorting, form data entry, number plate recognition, etc.