Literature survey

Team id: PNT2022TMID22701

Tittle : A Novel Method for Handwritten Digit Recognition System

1] Handwritten Digit Recognition using Python:

To make machines more intelligent, the developers are diving into machine learning and deep learning techniques. A human learns to perform a task by practicing and repeating it again and again so that it memorizes how to perform the tasks. Then the neurons in his brain automatically trigger and they can quickly perform the task they have learned. Deep learning is also very similar to this. It uses different types of neural network architectures for different types of problems. For example – object recognition, image and sound classification, object detection, image segmentation, etc.

2] A Literature Survey on Handwritten Character Recognition :

AUTHOR: Ayush Purohit

Character recognition is a fundamental, but most challenging in the field of pattern recognition with large number of useful applications. It has been an intense field of research since the early days of computer science due to it being a natural way of interactions between computers and humans. More precisely Character recognition is the process of detecting and recognizing characters from the input image and converts it into ASCII or other equivalent machine editable form.

3] Recognition of Handwritten English Numerals Based on Combining Structural and Statistical Features

AUTHOR: HAMSA D.MAJEED

Generally, pattern recognition considered a strong challenge in many information processing research fields. The aim of this paper is to propose a highly accurate model for recognizing a handwritten English numeral through efficiently extracting the most valuable features of a certain handwritten numeral or digit. The handwrit ten English Numerals Recognition Model (HENRM) is proposed in this paper. The features extraction of the proposal based on combining both statistical and structural features of the certain numeral sample image. Mainly, the proposed HENCM has four phases which are image acquisition, image preprocessing, features extraction, and classification. In fact, four feature extraction approaches are utilized in this paper, which are the number of intersection points, the number of open-end points, calculation of density feature, and determining the chain code for each of the English numerals.

4] Handwritten Character Recognition for Tamil Language Using Convolutional Recurrent Neural Network

The process of conversion of printed Tamil character from a handwritten Tamil character is known as handwritten Tamil character recognition. Handwritten characters are challenging to analyze because of the wide range of writing styles, as well as the varying sizes and orientation angles of the characters. This paper has the ability to recognize offline handwritten characters that presently supports Tamil language that has high accuracy and minimum validation loss by the system. The optical character recognition system developed for the Tamil language carry a poor recognition rate because of its numerous writing designs and enormous number of characters. The goal of this system is to notice a digital format for Tamil written document. The proposed method is to achieve a accuracy of ninety six percentage with the help of CRNN. I t is the foremost difficult task even although, numerous researches have been planned for written Tamil text. The trendy analysis during this domain has used the deep learning algorithm rule to improve the accuracy for the input document. This survey grants associate in fair review of the Tamil written character recognition, challenges, and diverse skills.Keywords Handwritten character recognition Written character recognition Tamil language Deep learning techniques Convolution recurrent neural network Hybrid neural network Artificial neural network or deep neural network.

5] Capsule Network Algorithm for Performance Optimization of Text Classification:

AUTHOR: Samuel Manoharan j

In regions of visual inference, optimized performance is demonstrated by capsule networks on structured data. Classification of hierarchical multi-label text is performed with a simple capsule network algorithm in this paper. It is further compared to support vector machine (SVM), Long Short Term Memory (LSTM), artificial neural network (ANN), convolutional Neural Network (CNN) and other neural and non-neural network architectures to demonstrate its superior performance. The Blurb Genre Collection (BGC) and Web of Science (WOS) datasets are used for experimental purpose. The encoded latent data is combined with the algorithm while handling structurally diverse categories and rare events in hierarchical multi-label text applications