

LITERATURE SURVEY

A Novel Method for Handwritten Digit Recognition System

Author name: Rajasekhararadheya S V, Vanaja Rajan P, Manjunath Aradhya VN

Year of Publishing: 2008

Description:

Handwritten character recognition has received extensive attention in academic and production fields. The recognition system can be either online or off-line. There is a large demand for Optical character recognition on hand written documents. India is a multi-lingual country and multi script country, where eighteen official scripts are accepted and have over hundred regional languages. In this paper we have proposed the projection distance metric and zoning based scheme for numeral recognition. We tested our proposed method for Kannada and Tamil numerals. A nearest neighbor classifier is used for subsequent purpose. The proposed method gives around 93% and 90% of recognition accuracy for Kannada and Tamil numerals respectively.

Author name: Doss K.R. Srikanth

Year of publishing: 2011

Description:

Recognizing the hand written document is one of the biggest challenges because of the variations in the handwritten text. The basic idea of this novel method is “divide and conquer”. The algorithm recognizes the image in form of predefined glyphs. Based on the arrangement of the recognized glyphs, the exact character in the image can be recognized by comparing with the predefined glyphs using pattern trees. These set of predefined pattern trees is the signature of each character. The input symbol is compared with each of the patterns and the highest match is found and the correct character is identified.

Author name: Dhanya Sudarsan, Shelbi Joseph

Year of publishing: 2018

Description:

Neural Networks is a hot area of research for various kind of pattern recognition. Hand writing recognition is a domain coming under the field of pattern recognition which had captured a high research interest during the last 10 years. It is a complex process mainly due to the huge character set, complexity and similarity of Malayalam letters. Our project aims to digitalize Malayalam handwritten text from Malayalam manuscripts like palm leaves, official documents in Government offices etc. An intensive literature survey was conducted on the various methods of handwriting recognition in various languages to find a best suitable approach for digitalizing Malayalam language. A novel approach to digitalize Malayalam manuscripts using contour detection for segmentation and Convolutional Neural Network for classification was proposed. The system was trained using the samples collected from museums and a neural network is constructed for character identification. According to the results obtained the system is proved to have less overhead without compromising the accuracy.

Author name: Sumedha Hallale, Geeta Salunke

Year of publishing: 2013

Description:

Directional features have been successfully used for the recognition of both machine printed as well as handwritten characters. Selection of feature extraction method is probably the single most important factor in achieving high performance in pattern recognition. In this paper, twelve directional features are used for the recognition of handwritten English alphabets and numerals. The properties of similarity measure are analysed with directional pattern matching. Then the comparison is made between recognition rate of conventional and twelve directional feature extraction techniques. The experiment shows that directional feature extraction techniques are better than conventional one.

Author name: Utkarsh Dwivedi¹, Pranjal Rajput², Manish Kumar Sharma³

Year of publishing: 2017

Description:

Cursive Handwriting recognition is a very challenging area due to the unique styles of writing from one person to another. Various researches have been conducted in this field since around four decades. In this paper, an offline cursive writing character recognition system is described using an Artificial Neural Network. The features of each character written in the input are extracted and then passed to the neural network. Data sets, containing texts written by different

people are used to train the system. The proposed recognition system gives high levels of accuracy as compared to the conventional approaches in this field. This system can efficiently recognise cursive texts and convert them into structural form.

SUBMITTED BY: Vishal V U