images, PDF, images, tamil characters etc.

To construct a web application to override the repetitive and redundancy tasks in online text recognition system through providing various user friendly technical facilities so that the traditional tedious process can be replaced with an easy one.

The ultimate aim is to convert printed text, either typed or handwritten, into digital, machine-encoded text with high accuracy using Convolutional recurrent neural network and Optical character recognition (OCR)

within the computer vision. Traditional methods rely on_ lexical segmentation, complex feature extraction techniques, and considerable knowledge of linguistics.

Here we present a new approach to handwriting recognition using Convolutional recurrent neural network (CRNN) in combination with Convolutions temporal classification (CTC).

This method has the advantage of not relying on lexical segmentation and manual feature extraction. Furthermore, the applied method is symbol- and character-agnostic, so the model is globally trainable and suitable for multiple languages.

nearly the same accuracy as humans.

Handwritten character recognition is one of the practically important issues in pattern recognition applications. The applications of character recognition include in postal mail sorting, bank check processing, form data entry, etc.

The heart of the problem lies within the ability to develop an efficient

algorithm that can recognize handwritten text and which is submitted

by users by the way of a scanner, tablet, and other digital devices.

Hulasikishna N.P, Seenia

Francis, â€œIntelligent Tool For Th

Cursive Handwritten Character e@ system can .

Recognition Using Artificial ML - Application identify cursive The accuracy 's low

Neural Network And handwritten text. and error is high.

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Ahlawat, S.; Rishi, R. A genetic

algorithm based feature Reduces Time and space

selection for handwritten digit ML - Algorithm computational Complexity was

recognition. Recent Pat. complexity. comparatively high.

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character recognition using the text using P is hi ,

fully convolutional neural patterns. error Is hign.

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METHODOLOGY

ML - Application

ML - Application

ADVANTAGES

Briefly explains the

$2S neural networks
based on handwriting
recognition.

The system can
identify the tamil
characters.

The system can
recognize the printed
text in images.

DISADVANTAGES

The accuracy is
comparatively less.

Misconceptions are
possible.

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METHODOLOGY

ML - Algorithm & Study

ADVANTAGES

The algorithm can be trained for different languages.

Briefly explains the algorithm and itâ€™s working.

DISADVANTAGES

Lack of availability of data-set of different languages.

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METHODOLOGY

ML - Algorithm

ADVANTAGES

Issues and challenges

are discussed

The accuracy is high.

DISADVANTAGES

Time Complexity

was comparatively
high.

The proposed system is implemented using CRNN network with Word Beam Search (CTC) algorithm.

The proposed system can identify 79 characters (alphabets, numerical, special characters).

The proposed system can identify tamil characters, built on the same architecture.

The proposed system can extract printed text from pdf and images using Tesseract OCR.

The proposed system has features like text-to-speech and language translation using ML packages.

The proposed system is highly efficient and scalable and also can be used to train for other languages.

Layer

Recurrent
Layers

sequence

Per-frame
predictions
(disbritutions

Deep

bidirectional

LSTM

Feature

sequence

Convolutional

feature maps

Convolutional

feature maps

Input image

Preprocessing handwritten images

Handwritten recognition

Optical character recognition

Text to speech conversion

Multilingual translation

Hard Disk : 120 GB

Monitor : 15â€• LED

Input Devices : Keyboard, Mouse

Ram: 8 GB

Gpu:4 GB

Operating System : Windows/Linux

Coding Language : Python 3

Web Framework : Flask

Database : Mongodb

Editor : Atom

IDE: Pycharm