Offline Handwriting Recognition using CNN

Abstract

Handwriting is one of the most important means of daily communication.Off-line handwriting recognition involves the automatic conversion of text in an image into letter codes which are usable within computer and text-processing applications. The data obtained by this form is regarded as a static representation of handwriting. Off-line handwriting recognition is comparatively difficult, as different people have different handwriting styles.we propose a workflow and a model for recognizing handwritten characters.The learning model is based on Convolutional Neural Network (CNN) as a powerful feature extraction .
we show that learning features with convolutional neural networks is better than using hand-crafted features for handwritten word recognition.The Project aims at a segmentation-based and lexicon-driven handwritten English recognition systems . After online segmentation of words, offline character recognition based on Convolutional Neural Networks (CNNs) are conducted.CNNs take 2-D image as its input. step 1 is Resizing and smoothing of images and then segmentation is applied on the characters in the word.Next step is character recognition .and finally word recognition is done whose accuracy will be around 90% .