Text Recognition

SUBMITTED BY GROUP 3 of LAB GROUP - C1

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1 Problem Description

Text Recognition is the problem of recognizing text in an image. Many problems need to be solved in order to read text in natural images includes text localization, character and word segmentation, recognition, etc. In our work, we have focused on *recognition* of individual characters in such images.
We have implemented our model based on Campos *et al.* [1].

2 Block diagram of Model

Figure 1 shows the block diagram of our model.

Image pre-processing: For removing noise in image we implemented *Median blur* & *Gaussian blur* filter. We got the idea from Patel *et al.* [2]. Then we converted the RGB image to Greyscale image. Finally, we resized the images into 30×30 for faster training.

Classifier: For classifier, we used Support Vector Machine(SVM).

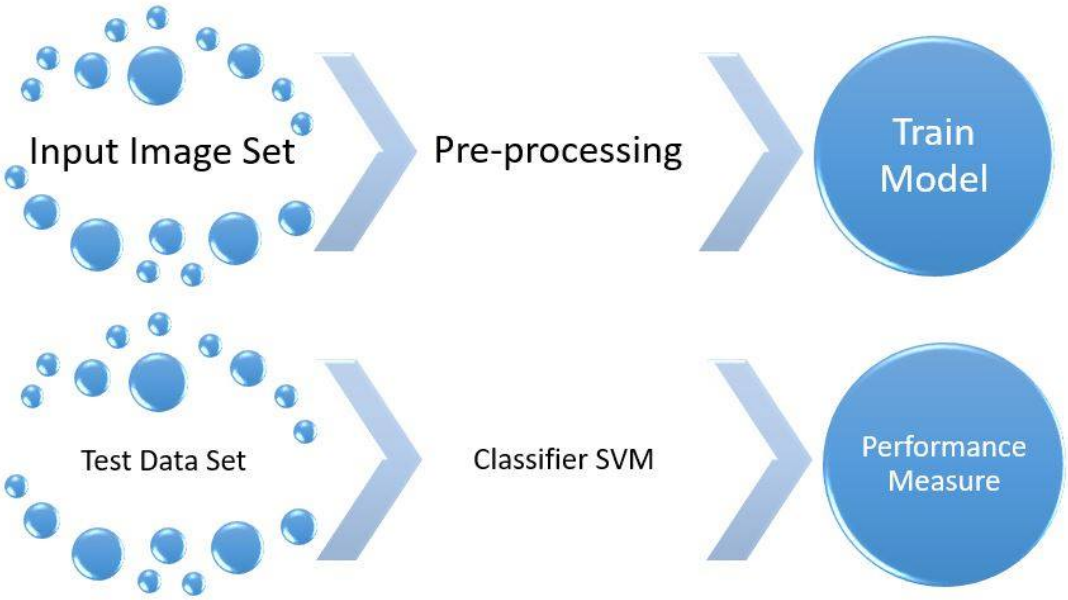

Figure 1: Block diagram of our model

3 Performance Analysis

We show the results of applying smoothing filter in Table 1. From table 1 we can clearly see that, using smoothing filter increased the accuracy of recognition.

Input	Accuracy
Without using smoothing filter	90.1%
Using smoothing filter	92.2%

Table 1: Using different pre-processing techniques

References

[1] De Campos, T. E., Babu, B. R., Varma, M., et al. Character recognition in natural images. *VISAPP (2) 7* (2009).

[2] Patel, I., Jagtap, V., and Kale, O. A survey on feature extraction methods for handwritten digits recognition. *International Journal of Computer Applications 107*, 12 (2014).