ACKNOWLEDGEMENT

The satisfaction that accompanies the successful completion of any task would be incomplete without the mention of the people who made it possible, and whose constant guidance and encouragement helped us in completing the project successfully. We consider it a privilege to express gratitude and respect to all those who guided us throughout the course of the completion of the project**.**

We would like to express our heartfelt thanks to **Prof. M. R. Doreswamy**, PESIT founder, **Prof. D. Jawahar**, CEO, **Dr. K.N.B. Murthy**, Vice Chancellor and **Dr. K.S. Sridhar**, Principal, for providing us with a congenial environment for presenting this project.

We would like to thank **Prof. Nitin V. Pujari**, HOD, Computer Science and Engineering, PESIT, whose guidance and support has been invaluable and for including the project as part of the course.

We take this opportunity to express our profound gratitude and deep regards to **Mrs. Jyothi R**, **Asst.Prof** our project guide. Her exemplary guidance, monitoring, and constant encouragement kept us going at all times, and we could not have asked for a better guide.

Last but not the least, we would like to thank our friends whose invaluable feedback helped us to improve the software by leaps and bounds, and our parents for their encouragement and support.

INDEX

ABSTRACT

With the popularity of the Internet and the smart mobile device, there is an increasing demand for the techniques and applications of image/video-based analytics and information retrieval. Most of these applications can benefit from text information extraction in natural scene. However, text extraction is a challenging problem to be solved, due to cluttered background of natural scene and multiple patterns of scene text itself. To solve these problems, this dissertation proposes a framework of text extraction.

Text extraction in our framework is divided into two components, detection and recognition. Text detection is to find out the regions containing text from camera captured images/videos. Text layout analysis based on gradient and colour analysis is performed to extract candidates of text strings from cluttered background in natural scene. Then text structural analysis is performed to design effective text structural features for distinguishing text from non-text outliers among the candidates of text strings. Text recognition is to transform image-based text in detected regions into readable text codes.

We are implementing our proposed text extraction framework for vehicle Number plates, which will be helpful to the Traffic police, where they can capture the image of the moving vehicles and extract the text from the captured image using our model. And they can collect the registration details of that vehicle like, owner info etc. which will be helpful in identifying stolen vehicles, Hit-and-Run cases and others.

User Manual:

Installation Dependencies

Install Java:

Version >=1.7

Install IDE like Eclipse, Netbeans etc.

OpenCV should be included in the IDE as a Library.

Version >=2.4.10

Guide through our Project.

"TEXT RECOGNITION FROM IMAGES OF VEHICLE NUMBER PLATE"

Import the project folder to the workspace.

Enter Username & Password to Login to the system

Click on About button to know about developers.

Click on Help button to know how to use the software

Click on RUN to run the system.

Click on Browse button to select the image file from your directory.

Click on Detect button to detect the text.

Wait for few seconds, processing takes….

Click on Extract to get a text in text field.

Click on Exit to exit from the software.

Bibliography:

In our initial study of the Text Recognition, we browsed through papers from IEEE and the internet was widely used. Some of the more relevant References are listed below.

References:

[1] C. Yi and Y. Tina, "Text string detection from natural scenes by structure-based partition and grouping," IEEE Trans. Image Process., vol. 20, no. 9, pp. 2594–2605, Sep. 2011.

[2] C. Yi and Y. Tina, "Localizing text in scene images by boundary clustering, stroke segmentation, and string fragment classification," IEEE Trans. Image Process., vol. 21, no. 9, pp. 4256–4268, Sep. 2012.

[3] Chucai Yi and Yingli Tian, "Scene Text Recognition in Mobile Applications by Character Descriptor and Structure Configuration," IEEE Trans. Image Process, vol. 23, no. 7, July 2014.

Links:

http://opencv.org/

http://docs.opencv.org/java/

http://stackoverflow.com/

http://docs.oracle.com/javase/7/docs/api/

http://answers.opencv.org/questions/

http://en.wikipedia.org/wiki/Connected-component_labeling