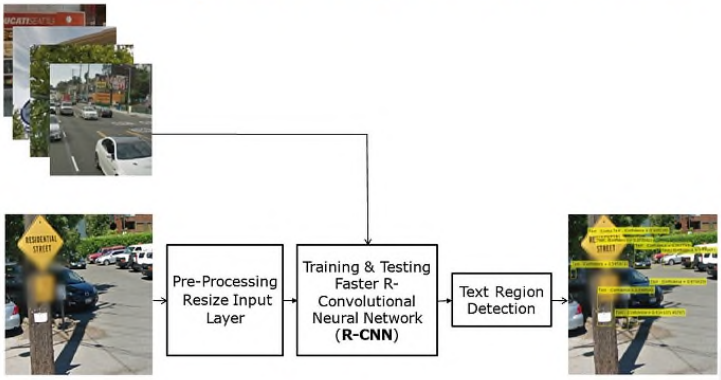
Text Detection Importance in Cyber Intelligence

Motivation

For cyber security, text recognition help analyzing huge volume of images and videos data. The extracted texts can be searched and indexed effectively. Researchers have demonstrated that once text is well detected, the existing text recognition methods can achieve high accuracy. Text detection is the current bottleneck and is a challenging computer vision task, because backgrounds in natural scenes such as street views are highly cluttered and the text in them has large difference in styles (e.g., artistic fonts, Time New Roman and Sim Sun with different colors), languages (e.g., Chinese, Japanese and English), sizes (e.g., text on a signboard of a cafe and text on its food menu board), illumination conditions (e.g., offices, restaurants, bars, sunny countryside, and cloudy streets), and contrasts (e.g., over-exposed and under-exposed).

An Exiting Method, Faster R-CNN

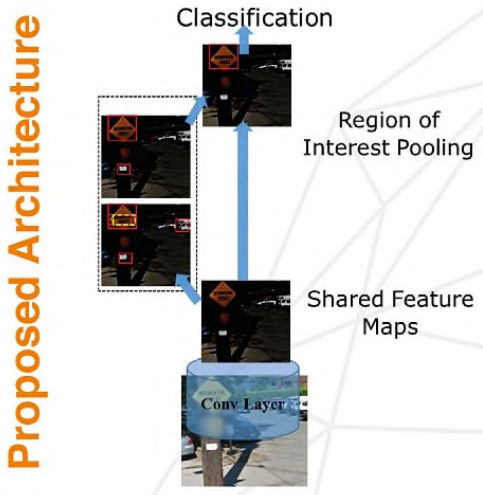


UTOI Scene Text Image Dataset

Sample images
Number of Images: >22k (10.1GB)
Number of Text Bounding Boxes: >111k

Description

An algorithm is proposed to exploit text features in a deep network directly and to train it end-to-end for achieving better performance in cyber forensics.



Experimental results

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