Abstract

The initiation of artificial intelligence, gave a curious approach towards the artificial neural networks. The developers are trying to make computers think and perform tasks just like humans. Artificial Neural Networks was developed with the view in mind to make computers to do so. The machines that are to be used in the field of robotics, medicines, industry needs to be so smart that they should be able to perform the day to day tasks easily without needing the human help. Take the case of self-driven cars, it is very crucial for the AI to make out the scenario in the real time and act accordingly take the necessary actions like breaking or evading in the traffics. Since the introduction of the object detection by the AI Researchers at Facebook, it has become easier for us to identify the objects in the images. While the object identifiers can use the image identification in the still images but there is a need to identify the text in the images. The techniques can be used for identification of the objects and texts in the real time scenario also. The present work here shows that image identification can work not only for the object identification but also identifies the text in the images as well. A CLAHE algorithm is developed to identify these objects in the images and text and classify these entities into the
categories as desired by the programmer. Here in this paper an attempt is made to show the working of an algorithm based on the EAST text detector and PMTD that can perform object as well as text identification in the real time itself. The algorithm achieved success in achieving the identification of the objects in under 5 seconds and better yet identifying text in under 1.5 seconds. The developed algorithm outperforms its earlier precursors. The Recall, Precision and F-measure values all were found better than both the previous algorithms.

References


Index Terms

Computer Science

Information Sciences
Keywords

ANN, AI, PMTD, EAST, CLAHE, Text Classification, Image Identification, Object Classification.