An Efficient Hybrid Architecture for Visual Behavior Recognition using Convolutional Neural Network

Volume 181 - Number 25

Year of Publication: 2018

Authors:

Md Javedul Ferdous, A. F. M. Saifuddin Saif, Dip Nandi, Mashiour Rahman

Abstract

The purpose of this research work is to understand of visual behavior from image. Since computer vision is hugely potential research area for researcher, connecting image captioning and detection of an object, visual behavior detection started to fasten researchers’ consideration because of its descriptive power and clear structure in terms of accuracy. By the progress of Deep Learning, giving the computer a chance to comprehend an image is by all accounts progressively closer. With the analysis on object recognition slowly getting to develop progressively more scientists put their consideration on more elevated amount comprehension of the scene. Object detection, visual context is now more consideration in scene understanding as a middle stage. The goal of the research is to discover visual relationships in a given image between objects and understand the whole scenario. This research presents a framework to this problem. Proposed approach performs object detection by using convolutional neural network. This research focus on relationships that can be generated by long short term memory (LSTM). The focus was to design the framework to adopt the Convolutional Neural
network with LSTM architecture. Proposed framework is validated using COCO dataset and achieved a BLEU-4 of 23.5 shows better efficiency than previous research methods.

References


Index Terms

Computer Science  Artificial Intelligence

Keywords

CNN; Deep learning; LSTM; Object detection; Scene graph; Visual behavior.