عنوان مقاله:

Deep Learning Based on Parallel CNNs for Pedestrian Detection

محل انتشار:

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نویسندگان:

Mahmoud Saeidi - *Faculty of Computer Engineering K. N. Toosi University of Technology Tehran, Iran*

Ali Ahmadi - *Faculty of Computer Engineering K. N. Toosi University of Technology Tehran, Iran*

خلاصه مقاله:

Recently, deep learning methods, mostly algorithms based on Deep Convolutional Neural Networks (DCNNs) have yielded great results on pedestrian detection. Algorithms based on DCNNs spontaneously learn features in a supervised manner and are able to learn qualified high level feature representations to detect pedestrian. In this paper, we first review a number of popular DCNN-based training approaches along with their recent extensions. We then briefly describe recent algorithms based on these approaches. Also, we accentuate recent contributions and main challenges of DCNNs in detecting pedestrian. We analyze deep pedestrian detection algorithms from training approach, categorization, and DCNN model points of view, and ultimately propose a new deep architecture and training approach for deep pedestrian detection. The experimental results show that the proposed DCNN and training approach, achieve more accurate rate detection than the previously reported architectures and training approaches.

کلمات کلیدی:

Parallel DCNN, Pedestrian Detection, Region-based Convolutional Neural Network (RCNN), Single Shot Detector (SSD), Training Approach.