

MULTIPLE OBJECTS TRACKING USING DEEP LEARNING

Dr. N. KAVITHA,
ADHITHYAVEL.A
INDRA GANESAN COLLEGE OF ENGINEERING,
MEPCO SCHLENK ENGINEERING COLLEGE

Abstract— Mostly computer vision problems related to crowd analytics are highly dependent upon multi-object tracking (MOT) systems. There are two major steps involved in the design of MOT system: object detection and association. In the first step, desired objects are detected in every frame of video stream. Detection quality directly influences the performance of tracking. The second step involves the correspondence of detected objects in current frame with the previous to obtain their trajectories. High accuracy in object detection system results in less number of missing detection and finally produces less fragmented tracks. Better object association increases the affinity between objects in different frames. This paper presents a novel algorithm for improved object detection followed by enhanced object tracking. Object detection accuracy has been increased by employing deep learning-based faster region convolution neural network (Faster R-CNN) algorithm. Object association is carried out by using appearance and improved motion features. Evaluation results show that we have enhanced the performance of current state-of-the-art work by reducing identity switches and fragmentation.