**COMPUTER VISION BASED CCTV ACCIDENT DETECTION AND LIVE UPDATING**

**ABSTRACT**

Computer vision-based accident detection through video surveillance has become a beneficial but daunting task. In this paper, a neoteric framework for detection of road accidents is proposed. The proposed framework capitalizes on Mask R-CNN for accurate object detection followed by an efficient centroid based object tracking algorithm for surveillance footage. The probability of an accident is determined based on speed and trajectory anomalies in a vehicle after an overlap with other vehicles. The proposed framework provides a robust method to achieve a high Detection Rate and a low False Alarm Rate on general road-traffic CCTV surveillance footage. This framework was evaluated on diverse conditions such as broad daylight, low visibility, rain, hail, and snow using the proposed dataset. This framework was found effective and paves the way to the development of general-purpose vehicular accident detection algorithms in real-time.