FIRE AND GUN VIOLENCE BASED ANOMALY DETECTION USINGDEEP NEURAL NETWORKS

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Abstract - On **Abstract:** In latest years, terror attacks seem to happen more often in public areas such as banks, schools and transportation system. In these areas surveillance systems have been used to identify suspicious individuals. Real-time object detection to improve monitoring methods are one of the desired applications of Convolution Neural Networks (CNNs). In this paper, we introduce a low-cost fire detection CNN architecture. The project is close to the discovery of fire and guns in camera-operated areas. Household fires, modern blasts, and rapidly spreading fires are a significant cause of the devastating impacts on the environment.Convolutional neural network-bases approaches have been very successful in image/video cataloguing and object recognition. In this project, the weapons are identified from the video, images, and webcam feeds. These are used to classify them to assistance further investigations by security personnel.

Weapon savagery and mass shootings are also increasing in some regions of the planet. Such events are time consuming and can result in serious loss of life and property. Therefore, the proposed project has developed an in-depth learning model based on the YOLOv3 algorithm that analyses the video frame by frame in order to detect what is confusing in real time and issue a warning to the relevant authorities.

INTRODUCTION

This project aims to develop a cost-efficient system that includes fire and gun detection for security purposes at a low cost. You Only Look Once is a real-time object identification system based on neural networks. Because