Suspicious Activity Detection

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Abstract: *Video Surveillance plays a significant role in today's world. Various technologies have been utilized to implement the safety of life and property by installing high quality CCTV cameras. It is impossible to manually monitor each and every moment activity. Furthermore, in practical scenario the most unpredictable one is human behavior and it is very difficult to find whether it is suspicious or normal. In this work the notion of Convolution Neural Network is used to detect suspicious or normal activity in an environment, and a system is proposed that sends an alert message to the corresponding authority, in case of predicting a suspicious activity. This project will entail detectingsuspicious human Activity from real-time CCTV footage using neural networks. Human suspicious Activity is one of the key problems in computer vision that has been studied for more than 15 years. It is important because of the sheer number of applications which can benefit from Activity detection. Hence, we plan to use neural networks to overcome these problems. Suspicious human activity recognition from surveillance video is an active research area of image processing and computer vision. Through the visual surveillance, human activities can be monitored in sensitive and public areas such as bus stations, railway stations, airports, banks, shopping malls, school and colleges, parking lots, roads, etc.to prevent terrorism, theft, accidents and illegal parking, vandalism, fighting, chain snatching, crime and other suspicious activities. It is very difficult to watch public places continuously, therefore an intelligent video surveillance is required that can monitor the humanactivities in real-time and categorize them as usual and unusual activities; and can generate an alert.*

Keywords: Convolution Neural Network, Anomaly, CCTV, Video Surveillance, etc

REFERENCES

[1]. Joey Tianyi Zhou, Jiawei Du, Hongyuan Zhu, Xi Peng, Rick Siow Mong Goh, "AnomalyNet: An Anomaly Detection Network for Video Surveillance, 2019.

[2]. Monika D. Rokade and Tejashri S. Bora, "Survey On Anomaly Detection for Video Surveillance" 2021 International Research Journal of Engineering and Technology(IRJET).

[3]. Jefferson Ryan Medel, Andreas Savakis, "Anomaly Detection in Video Using Predictive Convolutional Long Short-Term Memory Networks" under review.

[4]. W. Luo, W. Liu, and S. Gao, "A revisit of sparse coding based anomaly detection in stacked rnn framework," in The IEEE International Conference on Computer Vision (ICCV), Oct 2017

[5]. Y. S. Chong and Y. H. Tay, "Abnormal event detection in videos using spatiotemporal autoencoder," in International Symposium on Neural Networks. Springer, 2017, pp. 189–196.

[6]. J. R. Medel and A. Savakis, "Anomaly detection in video using predictive convolutional long short-term memory networks," arXiv preprint arXiv:1612.00390, 2016.

[7]. M. Hasan, J. Choi, J. Neumann, A. K. Roy-Chowdhury, and L. S. Davis, "Learning temporal regularity in video sequences," in Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2016, pp. 733–742.

[8]. M. Sabokrou, M. Fathy, M. Hoseini, and R. Klette, "Real-time anomaly detection and localization in crowded scenes," in The IEEE Conference on Computer Vision and Pattern Recognition (CVPR) Workshops, June 2015.

[9]. C. Lu, J. Shi, and J. Jia, "Abnormal event detection at 150 fps in matlab ," in Proceedings of the IEEE international conference on computer vision, 2013, pp. 2720–2727.

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[10]. H. Mousavi, M. Nabi, H. K. Galoogahi, A. Perina, and V. Murino, "Abnormality detection with improved histogram of oriented tracklets," in International Conference on Image Analysis and Processing. Springer, 2015, pp. 722–732.

[11]. Monika D.Rokade, Dr. Yogesh Kumar Sharma, "MLIDS: A Machine Learning Approach for Intrusion Detection for Real Time Network Dataset", International Conference on Emerging Smart Computing and Informatics (ESCI), IEEE 2021.

[12]. Monika D.Rokade, Dr. Yogesh Kumar Sharma, "Identification of Malicious Activity for Network Packet using Deep Learning ", in 2020

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