

Intelligent Video Surveillance using Deep Learning

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Abstract: In the current era, the majority of public places such as supermarket, public garden, mall, university campus, etc. are under video surveillance. There is a need to provide essential security and monitor unusual anomaly activities at such places. The major drawback in the traditional approach, that there is a need to perform manual operation for 24 * 7 and also there are possibilities of human errors. This paper focuses on anomaly detection and activity recognition of humans in the videos. The anomaly detection system uses principal component analysis network (PCANet) and Convolutional Neural Network (CNN) to solve the problems of manual operation such as the false alarms, missing of anomalous events and locating the position of an anomaly in the video. The frames wise abnormal event is detected using principal component analysis and Support Vector Machines (SVM) classifier. The location of the abnormality in a frame is detected using Convolutional Neural Network.

Keywords: Video Surveillance, Deep Learning, Data Collection, Training The Model, Python, CNN, SVM, Random Forest Tree, Html, AWS, Cloud Technology, Abnormal Activity, Camera, Convert Video To Frame

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