

Analysing Human Behaviour in ATM Surveillance Footage

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Abstract: *The ability of computers to predict potential crime scenes through the processing of CCTV footage can significantly enhance security. An intelligent automated system that can track, analyse, and efficiently detect irregular or suspicious activities in ATM environments would provide a proactive approach to crime prevention and surveillance. Researchers have proposed various approaches for crime prevention in ATM environments, including object detection methods using Fast R-CNN and Haar Cascade techniques for weapon detection, as well as pose-based abnormal behaviour detection models employing OpenPose, P3D ResNet, and CNN architectures for identifying anomalous activities. However, in most cases, surveillance cameras in ATM centres are still limited to mere recording, without real-time analysis or automated detection capabilities. The proposed method enhances ATM surveillance by integrating pose estimation, object detection, and human tracking techniques to detect abnormal activities. The system identifies individuals attempting to conceal their faces using objects such as helmets and promptly issues warnings, thereby promoting safer and more reliable ATM environments.*

Keywords: Surveillance, ATM, CCTV, Security, Crime

