Intruder Detection Recognition Alert System for Fencing Defence using Image Processing Techniques

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Abstract*: Nowadays it is observed that the significance of surveillance and security is increasing. In buildings, industrial areas, schools, and college security has become an essential aspect. Therefore, it becomes necessary to design and implement a system that presents a comprehensive solution that will be used for real-time detection of abnormal human activities. An interactive full stack full-fledge system can be developed to detect abnormal activities at fencing or country borders. The system development involves various frontend technologies like HTML, CSS and backend technologies like Python, OpenCV, Flask, etc. The system altogether acquires a success rate of about 90 percent, making it a reliable system to detect abnormal activities. The system captures video streams and collects detailed facial and full-body landmarks along with the proper timestamps for each activity—the sound alert mechanism implemented in the system which provides security along with timely notifications to the user. The main goal of conducting this research is to bring surveillance and security systems to a greater level which makes a significant contribution to the field.*

Keywords: Image Processing, Object Detection, Survillence, OpenCV, MediaPipe

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