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## **Automated Video Analytics for Workplace Safety Monitoring**

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**Abstract:** This paper presents an automated human detection system using the YOLOv5 deep learning model, which triggers an alarm when a person enters a predefined area within the frame. The solution is designed to enhance security systems by providing real-time detection. We describe the development, implementation, and evaluation of this system, highlighting its efficiency in detecting people and responding to security breaches in safety zones.

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Keywords: YOLO, Safety monitoring, Human detection, Region of Interest

