

Automated Video Analytics for Workplace Safety Monitoring

Abishek S K¹, Roshan Bosco A², Vishal Yadav H³, Dr. T. Anusha⁴

Students, Department of Computer Science and Engineering^{1,2,3}

Asst. Professor, Department of Computer Science and Engineering⁴

SRM Institute of Science and Technology, Chennai, India

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.*

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