IMPLEMENTING A DETECTION SYSTEM TO MONITOR ACTIVITIES AROUND THE HOUSE USING YOLOV8 ALGORITHM INTEGRATED TO TELEGRAM

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ABSTRACT

The absence of an effective and real-time activity monitoring system in residential settings can lead to discomfort and potential disturbances for the occupants. This study aims to design and implement an activity detection system for homes using the YOLOv8 algorithm, integrated with the Telegram application, to provide homeowners with real-time notifications about ongoing activities. The methods employed include the development of a YOLOv8-based detection algorithm and the integration of this detection system with Telegram. Testing was conducted under various environmental conditions to assess the system's reliability and efficiency. The results indicated that the developed detection system accurately identified both human and animal activities and successfully provided real-time notifications via Telegram. This system has demonstrated efficient and reliable performance across diverse environmental conditions, facilitating homeowners' ability to monitor activities around their homes and respond to situations promptly.

Keywords: Activity Detection, YOLOv8, Telegram, Real-Time Notification, Home Monitoring.