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Patent Search

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Abstract:

ABSTRACT The present invention introduces an intelligent surveillance system that utilizes reconfigurable hardware for real-time analysis and processing of surveillar leveraging optimized hardware components and advanced machine learning algorithms, the system offers enhanced security monitoring capabilities. The adaptable system allows customization and optimization to meet specific surveillance requirements, ensuring optimal performance in varying scenarios. With high-performanc detection and tracking, scalability for increasing workloads, and efficient resource utilization, the system provides accurate and timely insights for effective decision-r Equipped with advanced machine learning algorithms, it performs behavior recognition, anomaly detection, and semantic analysis, enabling real-time detection of se threats. The intelligent surveillance system presents a versatile solution with broad applications in various industries, including public safety, traffic management, ret operations, and smart cities initiatives.

Complete Specification

Description:FIELD OF THE INVENTION

The present invention relates to the field of surveillance systems, particularly in the context of intelligent surveillance using machine learning. More specifically, the invention pertains to a reconfigurable hardware system designed to enhance the capabilities of surveillance systems by leveraging the power of machine learning algorithms. The system enables real-time object detection, tracking, and anomaly detection in surveillance videos or images, thereby improving the overall efficiency and effectiveness of surveillance operations.

The invention addresses the need for advanced surveillance techniques that can adapt and learn from data in real-time. By utilizing reconfigurable hardware, such as FPGAs or ASICs, in combination with optimized machine learning models, the system can dynamically configure its hardware architecture to meet the specific requirements of different surveillance scenarios. This allows for efficient processing of large amounts of visual data, enabling tasks such as object identification, tracking, and recognition to be performed in real-time.

The reconfigurable hardware system for intelligent surveillance presented in this invention offers significant advantages over traditional surveillance systems. It leverages the power of machine learning to enhance the accuracy and efficiency of object detection and tracking. Additionally, the flexibility of the reconfigurable hardware allows for customization and adaptation of the system to different surveillance environments and changing requirements. The invention has broad applications in security, public safety, and various industries that require robust and intelligent surveillance capabilities.

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