Patent Search

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Abstract:

Exemplary embodiments of the present disclosure are directed towards an autonomous night patrolling robot for crime monitoring and live streaming systems and the method employed thereof. The system comprises a 2D LiDAR sensor positioned at the top of the robot. Equipped with the integration of SLAM techniques with the 2D LiDAR sensor, the robot effectively navigates confined industrial spaces, overcoming GPS limitations. Integrated with ROS2, the system intelligently navigates, avoids obstacles, and optimizes routes. The Smart Localizer transforms industrial operations by integrating cutting-edge technology, enhancing efficiency and safety. An ability to set multiple navigation targets, Goal Pose 1, Goal Pose 2, and Goal Pose 3, and guide the robot to reach these destinations resulting in it also categorizing dangerous regions based on severity and sending real-time alert notifications to relevant emergency service providers, including police stations and hospitals, with precise location details during an incident. Fig. 1A-Fig.1F.

Complete Specification

Description:TECHNICAL FIELD

[001] The present disclosed subject matter relates to a patrolling robot with significant potential in the field of security. More particularly, the present disclosure relates to an autonomous night patrolling robot for crime monitoring and a live streaming system and method employed thereof.

BACKGROUND

[002] In both rural and urban environments, ensuring security and safety during nighttime hours poses a significant challenge. Traditional surveillance methods typically rely on human intervention, which can be inefficient, costly, and sometimes hazardous. There is an urgent need for an autonomous system that can effectively patrol designated areas, detect suspicious activities or weapons, and swiftly relay critical information to law enforcement authorities.

[003] The Robot session is an IoT-based patrolling robot with great potential in the field of security. Designed to serve as a security guard in various locations, including offices, homes, and warehouses, it is equipped with a camera to capture images and videos of its surroundings. Operated via an Arduino board, the robot can navigate using different communication methods such as Bluetooth, command-line inputs, hand gestures, and Wi-Fi. The live recordings captured by the robot's camera are stored on a server, which users can access remotely from any device with server access.

View Application Status

Department of Industrial Policy and Promotion
Government of India

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