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Intrusion Detection System using Regulated Patrolling Robots for Apartments

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Abstract: Nowadays robots are incorporated in the job which are often difficult for humans and these robots can be used as an effective alternative for humans. Mobile robots have become a significant topic in the security field Several techniques have been introduced to work with mobile robots and security. Most of these methods are not capable of working in low visibility environments and need to be manually controlled by a person all the time. In this smart security system, a mobile robot acts as an e-patrol in both light and dark environments. The design and implementation of mobile robots consist of three subsystems: The obstacle avoidance, image capturing and alarm indication for theft prevention. By means of which bot can be deployed for surveillance in a defined path with specific intervals.

Keywords: Computer vision, Security, IOT, Surveillance, Mobile robot

REFERENCES

- [1]. Muhammad Hamza, M Atique-ur-Rehman, Hamza Shafqat, Subhan Bin Khalid's,"CGI SCRIPT AND MJPG VIDEO STREAMER BASED SURVEILLANCE ROBOT USING RASPBERRY PI" published in 16th International Bhurban Conference on Applied Sciences & Technology (IBCAST) Islamabad, Pakistan, 8th 12th January, 2019
- [2]. GokulaChandar ,Leeban MosesM; T. Perarasi M; Rajkumar; "Joint Energy and QoS-Aware Cross-layer Uplink resource allocation for M2M data aggregation over LTE-A Networks", IEEE explore, doi:10.1109/ICAIS53314.2022.9742763.
- [3]. DhudduHaripriya, Venkatakiran S, Gokulachandar A, "UWB-Mimo antenna of high isolation two elements with wlan single band-notched behavior using roger material", Vol 62, Part 4, 2022, Pg 1717-1721, https://doi.org/10.1016/j.matpr.2021.12.203
- [4]. GokulaChandar A, Vijayabhasker R., and Palaniswami S, "MAMRN MIMO antenna magnetic field", Journal of Electrical Engineering, vol.19, 2019.
- [5]. Rukkumani V , Moorthy V, Karthik M , Gokulachandar A, Saravanakumar M, Ananthi P, "Depiction of Structural Properties of Chromium Doped SnO2 Nano Particles for sram Cell Applications", Journal ofMaterials Today: Proceedings, vol.45, pp.3483-3487, 2021. https://doi.org/10.1016/j.matpr.2020.12.944
- [6]. Mayuri Sonkusare, Akshata Raut, Dhanashree Tamhane, Deepali Palase, Amit Maurya "Surveillance Robot with Human Detection published in the 2nd International Conference on Inventive Communication and Computational Technologies (ICICCT 2018)
- [7]. Diksha Singh,PoojaZaware and Dr Anil Nandgaonkar "Wi-Fi Surveillance Bot with Real Time Audio & Video Streaming Through Android Mobile" published in IEEE Transactions on International Conference On Recent Trends in Electronics Information & Communication Technology (RTEICT) in 2017.
- [8]. Meghana S, Nikhil Teja V, Raghuveer Murali, Sanjana S, Vidhya R Khurram J Mohammed's" DESIGN AND IMPLEMENTATION OF SURVEILLANCE ROBOT FOR OUTDOOR SECURITY" published in

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- 2nd IEEE International Conference.On Recent Trends In Electronics Information & Communication Technology, May 19-20, 2017, India.
- [9]. Chirag B,ManjunathA.E,Badrinath KB "An Intelligent Cloud based Cost Effective Surveillance Robot" published in IEEE 2014.
- [10]. Dr.Thair Ali Salh, Mustafa Zuhaer Nayef's "Intelligent Surveillance Robot " published in The First International Conference of Electrical, Communication, Computer, Power and Control Engineering ICECCPCE'13!December17-18, 2013.
- [11]. Xinyu Wu, Haitao Gong, Pei Chen, Zhong Zhi and Yangsheng Xu "Intelligent household surveillance robot "published in IEEE Transactions on International Conference on Robotics and Biomimetics in 2009.
- [12]. Mohammed Faisal, Hassan Mathkour, Mansour Alsulaiman's "Smart Mobile Robot for Security of Low Visibility Environment" published in Centre Of Smart Robotics Research (CSRR), College of Computer & Information Sciences (CCIS) King Saud University Riyadh, Saudi Arabia
- [13]. Aditya Sundaram, Monel Gupta, VinodRathod, K Chandrasekaran "Remote Surveillance Robot System- A Robust Framework using Cloud" Published in 2015 IEEE International Symposium on Nanoelectronic and Information Systems
- [14]. Ki Sang Hwang; Kyu Jin Park; Do Hyun Kim; Sung-Soo Kim; Sung Ho Park "Development of a Mobile Surveillance Robot" Published in International Conference on Control, Automation and Systems 2007
- [15]. Daniela D'Auria, Fabio Persia, Fabio Bettini, Sven Helmer, Bruno Siciliano "SARRI: a SmArtRapiro Robot Integrating a framework for automatic high-level surveillance event detection" Published in 2018 Second IEEE International Conference on Robotic Computing.
- [16]. Kyunghoon Kim, Soonil Bae, and Kwanghak Huh "Intelligent surveillance and security robot systems" Published in 2010 IEEE Workshop on Advanced Robotics and its Social Impacts
- [17]. Rafael G. N. da Silva, Almir K. Junior "Indoor surveillance robotic system using an autonomous mobile robot" Published in 2015 CHILEAN Conference on Electrical, Electronics Engineering, Information and Communication Technologies (CHILECON)
- [18]. [18] S.Kannadhasan & R. Nagarajan (2022): Performance improvement of antenna array element for mobile communication, Waves in Random and Complex Media, DOI: 10.1080/17455030.2022.2036867
- [19]. Ashish U. Bokade; V. R. Ratnaparkhe "Video Surveillance Robot Control using Smartphone and Raspberry Pi" Published in International Conference on Communication and Signal Processing, April 6-8, 2016, India

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