



Smart Security Camera using Machine Learning

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Abstract: Numerous applications have been found for video surveillance. Smart video surveillance systems can improve situational awareness at various scales of time and space. It describes a remote control and surveillance architecture based on mobile devices. To record camera photos and detect intrusion using an image comparison technique, this project uses the Opencv library. The streamed video is sent from the server to the remote administrator over the phone after the comparison is completed and an intrusion is discovered. Afterward, admin can take the necessary action. Automatic video analytics are used in smart surveillance to increase the efficiency of security measures. By automatically identifying the individual's deviant conduct, this system complements the existing video surveillance systems while also introducing intelligent analysis of single person activity to improve home security. By sending an SMS, the user is informed and the pertinent data is recorded. The user is able to watch the specific video. This system keeps the home secure, which lowers the frequency of burglary cases and improves social stability.

Keywords: Video Surveillance, Open CV, Surveillance engine

REFERENCES

- [1]. R.Chandana, Dr.S.A.K.Jilani, Mr.S.Javeed Hussain, "Smart Surveillance System using Thing Speak and Raspberry Pi", International Journal of Advanced Research in Computer and Communication Engineering Vol. 4, Issue 7, July 2015.
- [2]. TS Vishnu Priya, G.Vinitha Sanchez, N.R Raajan "Facial Recognition System Using Local Binary Patterns(LBP)"- International Journal of Pure and Applied Mathematics vol.119 No.15 2018, 1895-1899
- [3]. Sushma Jaiswal, Dr. Sarita Singh Bhadauria, Dr. Rakesh Singh Jadon "Comparison Between Face Recognition Algorithm-Eigenfaces, Fisherfaces and Elastic Bunch Graph Matching"- Journal of Global Research in Computer Science vol.2, No.7, July 2011.
- [4]. A. Singh, A. Rana, J. Ranjan, "An improvised approach to generate significant association rules from customer transaction database- empirical analysis", in Journal of Theoretical and Applied Information Technology, Vol. 68, Issue 2, pp443-453 (2014).
- [5]. A. Rana, S. P. Singh, R. Soni, A. Jolly, "Challenges of global Stakeholder's in software release", in 2014 International Conference on Computing for Sustainable Global Development, INDIACOM 2014, pp 551-555 (2014).
- [6]. D. Gupta, A. Rana, "Fibonacci driven novel test generation strategy for Chinmaya Kaundanya, Omkar Pathak, Akash Nalawade, Sanket Parode, "Smart Surveillance System using Raspberry Pi and Face Recognition", International Journal of Advanced Research in Computer and Communication Engineering vol.6, Issue 4, April 2017.
- [7]. Umera Anjum and B. babu, "IOT Based Theft Detection using Raspberry", International Journal of Advanced Research in Computer and Communication Engineering vol.3, issue 6.



- [8]. Ajay Vikram Singh, Moushumi Chattopadhyaya, “Mitigation of DoS Attacks by Using Multiple Encryptions in MANET”, 2015 4th IEEE International Conference on Reliability, Infocom Technologies and Optimization (ICRITO) (Trends and Future Directions), 2015 at AUUP, NOIDA, India, September 02-04, 2015 DOI: 10.1109/ICRITO.2015.7359300
- [9]. Priya B. Patel, Viraj M. Choksi, Swapna Jadhav, M.B. Potdar, “Smart Motion Detection System using Raspberry Pi” International Journal of Applied Information Systems (IJAIS) – ISSN: 2249-0868 Foundation of Computer Science FCS, New York, USA Volume 10 – No.5, February 2016.
- [10]. Sadhana Godbole, Shiviani Deshpande, Neha barve and Sakshi, “Review on Theft Prevention System using Raspberry Pi and PIR Sensor”, International Journal of Computer Applications (0975 – 8887) Volume 155 – No 11, December 2016.
- [11]. Danish Showkat, Subhranil Som, Sunil Kumar Khatri, (2018) “Security Implications in IoT using Authentication and access control”, 7th International Conference on “Reliability, Infocom Technologies and Optimizations (Trends and Future Directions) ICRITO 2018, Published IEEE Xplore: 01 July 2019