

Deep Learning Approach for the Automatic Detection of Suspicious Human Activity

Aniket Tiwari¹, Aman Sharma², Vidhi Sethiya³, Vandana Kate⁴, Nisha Rathi⁵

Students, Department of Computer Science and Information Technology^{1,2,3}
Project Guide, Department of Computer Science and Information Technology⁴
Project Incharge, Department of Computer Science and Information Technology⁵
Acropolis Institute of Technology and Research, Indore, Madhya Pradesh, India

Abstract: *The development of a security system that is totally automated, detects aberrant activity in real time, and provides a notification to the responsible authority with evidence. As a result, we devised a technique for examining and detecting suspicious human. This study presents one of the most important applications of human suspicious activity detection, known as "anomaly detection." Individual safety is a major problem in every community nowadays. The fundamental reason for this worry is the ever-increasing number of behaviours on campus that pose a hazard, such as mischief, fighting, and theft. A simple installation of a typical closed-circuit television (CCTV) system is insufficient since it requires a person to be vigilant and watch the cameras at all times, which is wasteful. This necessitates behaviour.*

Keywords: Machine Learning, Deep Learning, CNN (Convolutional Neural Network), and Suspicious Activity Detection.

REFERENCES

- [1]. Tejashri Subhash Bora¹, Monika Dhananjay Rokade² "Methodology for Human Suspicious Activity Detection"2021.
- [2]. J. indhumathi and M. balasubramanian, "Real time video based human suspicious activity recognition using deep learning"2022.
- [3]. Balbhini Lanke and Zarinabegam Mundargi, "Abnormal Activity Detection Using CNN Method"2022.
- [4]. Nandini. G1, Dr. B. Mathivanan², Nantha Bala. R. S3, Poornima. P4, "Suspicious human activity detection"2018.
- [5]. S. A. Quadri¹, Komal S Katakdhond², "Suspicious Activity Detection Using Convolution Neural Network"2022.
- [6]. Dinesh Jackson Samuel R, Fenil E, Gunasekaran Manogaran, Vivekananda G.N, Thanjaivadivel T, Jeeva S, Ahilan A, "Real-time violence detection framework for football stadium comprising of big data analysis and deep learning through bidirectional LSTM"
- [7]. Gurav, S. S., Godbole, B. B., & Sonale, M. S. "Improved accuracy of suspicious activity detection in surveillance video"
- [8]. J. Sujanaa and S. Palanivel, "Real-time video based emotion recognition using convolutional neural network and transfer learning"
- [9]. C. Yeole, H. Singh, H. Waykole and A. Deshpande, "Deep Neural Network Approaches for Video Based Human Activity Recognition"
- [10]. C. V. Amrutha, C. Jyotsna and J. Amudha, "Deep Learning Approach for Suspicious Activity Detection from Surveillance Video"
- [11]. Gugale¹, Abhiruchi Shendkar², Arisha Chamadia³, Swati Patra⁴, Deepali Ahir⁵, "Human Suspicious Activity Detection using Deep Learning Rachana"
- [12]. Rajesh Kumar Tripathi, Anand Singh Jalal & Subhash Chand Agrawal "Suspicious human activity recognition"

- [13]. Ahmed Mateen Buttar¹ • Mahnoor Bano¹ • Muhammad Azeem Akbar² • Amerah Alabrah³ • Abdu H. Gumaei⁴ “Toward trustworthy human suspicious activity detection from surveillance videos using deep learning”
- [14]. M. Adimoolam, N. M. Balamurugan, Karthi Govindharaju “Suspicious Actions Detection System Using Enhanced CNN and Surveillance Video”
- [15]. Bushra Yasmeen¹, Haslina Arshad², Hameedur Rahman³ “Suspicious Activity Detection Using CCTV Surveillance Video”
- [16]. Arroyo, R., Yebes, J.J., Bergasa, L.M., Daza, I.G. & Almazán, J. 2015, “Expert video-surveillance system for real-time detection of suspicious behaviors in shopping malls”