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## A Survey on Deep Learning Approach for Suspicious Activity Detection from Surveillance Video

Prof. Malan Sale<sup>1</sup>, Arvind Patkal<sup>2</sup>, Harshal Mahale<sup>3</sup>, Jyoti Lavhale<sup>4</sup>, Sunayana Apsingekar<sup>5</sup>

Faculty, Department of Computer Engineering<sup>1</sup>
Students, Department of Computer Engineering<sup>2,3,4,5</sup>
Sinhgad Institutes Sinhgad College of Engineering, Vadgaon Bk. Pune, Maharashtra, India
Savitribai Phule Pune University, Pune, Maharashtra, India

Abstract: Suspicious Activity is predicting the body part or joint locations of a person from an image or a video. This project will entail detecting suspicious human Activity from surveillance video using neural networks. It is important because of the sheet number of applications which can benefit from Activity detection. For example, human pose estimation is used in applications including video surveillance, animal tracking and behavior understanding, computer interaction. Suspicious human activity recognition from surveillance video is an active research area of image processing and computer vision. Through the visual surveillance, human activities can be monitored in sensitive and public areas such as bus stations, railway stations, airports, banks, shopping malls, school and colleges, parking lots, roads, etc. to prevent terrorism, theft, accidents and illegal parking, vandalism, fighting, crime and other suspicious activities. It is very difficult to watch public places continuously, therefore an intelligent video surveillance is required that can monitor the human activities in real-time and categorize them as usual and unusual activities; and can generate an alert.

Keywords: Video Surveillance, Suspicious Activity, neural networks

## REFERENCES

- [1]. Naimat Ullah Khan, Wanggen Wan: "A Review of Human Pose Estimation from Single Image"- 978-1-5386-5195-7/18/2018 IEEE
- [2]. Qiuhui Chen, Chong yang Zhang, Weiwei Liu, and Dan Wang, "Surveillance Human Pose Dataset And Performance Evaluation For Coarse-Grained Pose Estimation", Athens 2018.
- [3]. Baole Ai, Yu Zhou, Yao Yu: "Human Pose Estimation using Deep Structure Guided Learning"- 978-1-5090-4822-9/17 2017 IEEE DOI 10.1109/WACV.2017.141
- [4]. Zhe Cao, Tomas Simon, Shih-En Wei, Yaser Sheikh The Robotics Institute, Carnegie Mellon University "Real time Multiperson 2D Pose Estimation using part affinity fields" 1063-6919/17 2017 IEEE DOI 10.1109/CVPR.2017.143
- [5]. Hanguen Kim, Sangwon Lee, Dongsung Lee, Soonmin Choi, JinsunJu and Huyun Myung "Real-Time Human Pose Estimation and Gesture Recognition from depth Images Using Superpixels and SVM classifier."- Sensors 2015, 15, 12410-12427; doi:10.3390/s150612410
- [6]. Tripathi, Rajesh and Jalal, Anand and Agarwal, Subhash(2017). "Suspicious Human Activity Recognition: a Review". Artificial Intelligence Review. 50.10.1007/s10462-017-9545-7.
- [7]. E. Eksioglu. Decoupled algorithm for MRI reconstruction using nonlocal block matching model: BM3DMRI. Journal of Mathematical Imaging and Vision, 56(3):430–440, 2016.

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