

Survey on Image detection technique

Swapnali Kore¹, Aishwarya Kadam², Mukta Kumbhar³, Pranjali Kohinkar⁴

²U.G. Student, Department of Computer Engineering, NBN Sinhgad School of Engineering, Pune, India.

Abstract - In the last decade, the growing capacity of Information technology revolutionized data and information Management, especially data editing, data Process and forecast. The effort has been made in the true sense Interdisciplinary, where, image processing techniques and AI Based model implementation has played their role. Latest Technology innovations have enabled researchers to take action Computer experiments that never were It is possible if you try to use traditional methods. This survey paper studies various methods Forensic image detection search. This paper provides a systematic analysis of this Accurate and with various existing Forensic image detection techniques Representation system. Has shown support for the study Aptitude and behavior of existing methods and future scope.

Keywords— Forensic image detection Recognition, Forensic image detection, Machine Learning, Image Processing, Artificial Intelligence, Matlab.

1. INTRODUCTION

Editing, archiving and processing digital images

There are still important applications happening in our daily lives. Digital image-processing technology is fully available today Transformed the approach to image digitization and sharing It is available on multiple web and mobile platforms. Today we are Able to instantly share, send and receive photos online Send / receive multimedia and audio / video messages Quick; Also watch live stream videos

The world. This has been made possible by those innovations. This has happened on both software and hardware devices Supporting digital imaging fields. Analyzing large amounts of data is a necessity These days.

There is more and more analysis of technology, storage and data Using more effective platforms like AWS, Azhar and Google Clouds; Many tons of data can be transferred from an on-premise server Once the data is available on the cloud to cloud it Admission is available to everyone Privilege. Multiple backups keep data on the cloud safe Copies are maintained by cloud vendors. The term Forensic image detection recognition is commonly used to describe Computer vision functions that involve identifying Forensic image detection s Digital image. Refers to the image classification process Estimation of the class of the Forensic image detection. Recognizes Forensic image detection localization. The location of the Forensic image detection in the image and the bounding box Finding the Forensic image detection around the Forensic image detection, its focal

point. The survey paper often combines these two functions of classification and localization in the image. There are examples of Forensic image detection finding Face detection, pedestrian detection etc. Forensic image detection is a popular field these days Research among practitioners. One method used is Forensic image detection, to detect the occurrence of an Forensic image detection in an image / video. The purpose of these methods of replicating human intelligence When it comes time to quickly identify Forensic image detections in images or video. These methods mainly use algorithms. An approach based on machine learning to provide output. The Finding the main item is the definite purpose of finding the Forensic image detection. Draw a rectangular bounding box around them and define it. The class of each Forensic image detection identified. Exists in multiple applications. Areas of Forensic image detection such as face recognition and identification OCR recognition, driverless car, video surveillance system, Pedestrian search and medical images.

2. REVIEW OF LITERATURE

As part of this survey review, there were nearly 100 papers Downloaded to present a systematic technical analysis Of various digital Forensic image detection techniques Libraries, including IEEE Explorer, Science Direct, Google Scholar, ACM and more. After studying the paper title, Abstract, Introduction, Experiment and Future Scope, 24 Most Papers suitable for review were identified and Systematically arranged in this section of the paper.

Reviewed literature on previous efforts Made in the field of research and development of Forensic image detection s Discovery and use of various machine learning and depth The Nervous System Network material survey included in the discussion above Significant contributions made by various scholars Discipline. In this work, the authors have tried to solve the problem Reduce time and effort to manually monitor quality of fruits [1]. Authors have used many library functions and features of the model for designing and developing fruit models Examination. System initial color, size, Nutrition, size and weight of an ideal fruit. Then, compare Posts of images are captured and shown as a result

The results of the output experiments were compared with the past Research work and it was shown and shown to be exciting Decrease in effort and improvement in accuracy.

In this paper, the author has an innovative discussion

Obtaining visual recognition of Forensic image detection is an experiment.

Demonstrated how this technique can be effective in identification and finding the right Forensic image detection from a pile of other Forensic image detections.

It includes the process of defining exact properties and

Proper characteristics of geometric shapes. There are techniques Extremely useful when distinguishing between the right Forensic image detection s There are many other Forensic image detection s in the background [2]. In this paper, the author proposes an approach

Face the challenges posed by visual n gnosis in

In this type of patient condition, individuals are not capable

Identify two-dimensional (2-D) images. The author used

A method of compiling or comparing image sizes

In-Congress compared to real-life images. []].

In this paper the authors have taken note of the size of the Forensic image detection . It is mainly mediated by the superficial visual cortex. There are authors Used Matlab tool to combine multiple images to generate

High-resolution output as a logical result. A script was written To overlay the input images, which have been captured here

Different ratios and angles were the color of the input images

Combined using programming and output designed with Combinations and color combinations []].

In this paper, the authors have used aerial image datasets Design, train and test the model. Added classes to the dataset

The author used many types and colors of vehicles deep

CNN classifier-based approach to model design. The model compared and matched the aerial obtained Provided images and output with expected class In the form of yes / no, matching is found or [5] No.

In this paper, the authors have provided an approach using Deep learning-based CNN model for aerial capture Images to identify pedestrians and find actions

Taken by them. The authors used a single shot multi box

Detector (SSD for creating Forensic image detection propositions [6].

Color plays a big role in finding and in the Forensic image detection

Identity. In this book, the author has given an explanation

The complex concept of mathematics and when it comes

To use colors in digital image processing. Chapter

The book contains an in-depth discussion of several industry use cases

Techniques used to apply colors in DIP [7].

In this paper, the authors have explained the workflow

Using the Viola-Jones algorithm for face recognition. Author

Integration of Matlab and Arduino software for this

Planting algorithms and monitoring the results in real time scenarios. Such use is being widely implemented

Security surveillance cases []].

In this paper, the author has made an innovative design

Approach to identify and discover vegetables. This

It was designed with the use of large warehouses in mind

And the mall used to store vegetables. The purpose was

Enable the mall checkout process to be quick and efficient

Impressive Initially, images were captured and multiplied

Highlights like weight, texture, color are stored.

These characteristics are then analyzed to identify the vegetable. The

The results of the research were found to be encouraging []].

In this paper, the authors used Matlab and two softwares.

Photoshop to compare laboratory and three methods

Colony counting with image processing techniques. The

Efficiency, ease of use and these high-end features

The software was discussed and the results showed incidents in that use

Effective use of this software to enhance the image

[10].

In this paper, the authors propose solutions in the field

Computer vision for bold Forensic image detection recognition. A subset of AI

The branch known as deep learning has been used for image

Authors from CNN and

Performed the same test on multiple datasets, the results showed in depth.

The learning-based model is better than other methods

3. A Gentle Introduction to Generative Adversarial Networks-:

Generative Adversarial Networks, or GANs for short, are an approach to generative modeling using deep learning methods, such as convolutional neural networks. Generative modeling is an unsupervised learning task in machine learning that involves automatically discovering and learning the regularities or patterns in input data in such a way that the model can be used to generate or output new examples that plausibly could have been drawn from the original dataset.

GANs are a clever way of training a generative model by framing the problem as a supervised learning problem with two sub-models: the generator model that we train to generate new examples, and the discriminator model that tries to classify examples as either real (from the domain) or fake (generated). The two models are trained together in a zero-sum game, adversarial, until the discriminator model is fooled about half the time, meaning the generator model is generating plausible

4. CONCLUSION

In this work we presented a review study of the Forensic image detection Search. This paper first identifies the importance of the Forensic image detection and summarizes from one search. We have conducted surveys to find out the mechanism of various Forensic image detection s. This survey provides theoretical knowledge about it. The approach of finding different Forensic image detection s is based on this study. The based approach has been found to be particularly effective in deep neural networks and CNN and may be recommended for future research in the field of Forensic image detection.

REFERENCES

[1]AN. Jayanthi, C. Naresh kumar, S. Rajesh, "Fruit Quality Inspection System Using Digital Image Processing Technique", *Iconic Research and Engineering Journals*, 2, pp.260-263, 2019.

[2] S. Gong, C. Liu, Y. Ji, B. Zhong, Y. Li, H. Dong, "Visual Forensic image detection Recognition. In *Advanced Image and Video Processing Using MATLAB*" pp. 351-387. Springer, Cham., 2019.

[3] D. E. Holler, M. Behrmann, and J. C. Snow, "Real-world size coding of solid Forensic image detection s, but not 2-D or 3-D images, in visual agnosia patients with bilateral ventral lesions," *Cortex*, vol. 119, pp. 555-568, Oct. 2019. [4] Z. Bhutto, MZ. Tunio, A. Hussain, J.Shah, I.Ali, MH. Shaikh, "Scaling of Color Fusion in Stitching Images," *IJCSNS*, 19(4), 2019.

[5] A. Soleimani, N. M. Nasrabadi, E. Griffith, J. Ralph, and S. Maskell, "Convolutional Neural Networks for Aerial Vehicle Detection and Recognition," *NAECON 2018 - IEEE National Aerospace and Electronics Conference*, Jul. 2018.

[6] A. Soleimani and N. M. Nasrabadi, "Convolutional Neural Networks for Aerial Multi-Label Pedestrian Detection," *2018 21st International Conference on Information Fusion (FUSION)*, Jul. 2018.

[7] A. M. Grigoryan and S. S. Agaian, "Quaternion and Octonion Color Image Processing with MATLAB," Apr. 2018.

[8] V.S., Pamulapati, Y.S. Rohan, V.S Kiran, S. Sandeep, and M.S. Rao, " Real-Time Face Tracking Using Matlab And Arduino". *Electronics And Communication Engineering*, Vasireddy Venkatadri Institute Of Technology, 2018

[9] S.Biswas, N.Ullah, M.Mazumder, "Machine Vision Based Vegetable Recognition", 2018. Authorized licensed use limited to: University of Massachusetts Amherst. Downloaded on July 16,2020 at 13:29:36 UTC from IEEE Xplore. Restrictions apply.

[10] X. Chen, S. Li, Z. Zhang, and J. Gao, "The Colony Count Based on Image Processing Using Matlab and Photoshop," *Proceedings of the 2018 International Conference on Computer Science, Electronics and Communication Engineering (CSECE 2018)*, 2018. [BIOGRAPHIES (Optional not mandatory)

[11] S. P. Bendale and J. Rajesh Prasad, "Security Threats and Challenges in Future Mobile Wireless Networks," *2018 IEEE Global Conference on Wireless Computing and Networking (GCWCN)*, Lonavala, India, 2018, pp. 146-150, doi:10.1109/GCWCN.2018.8668635.

[12] Shailesh Pramod Bendale, Jayashree Rajesh Prasad. (2020). Security Challenges to provide Intelligence in SDN with the help of Machine Learning or Deep Learning. *International Journal of Advanced Science and Technology*, 29(05), 356 - 363.

Retrieved from <http://sersc.org/journals/index.php/IJAST/article/view/8983>

[13] Chinmay Dharmadhikari, Salil Kulkarni, Swarali Temkar, Shailesh Bendale , Comparative Analysis of DDoS Mitigation Algorithms in SDN , *International Journal of Future Generation Communication and Networking* Vol. 13,

No.2s, (2020), pp. 1700–1707
<http://www.sersc.org/journals/index.php/IJFGCN/article/view/29228/16286>

[14] Mr. Shailesh P. Bendale, M. A. R. S. (2020). Implications and Application of Artificial Intelligence and Machine Learning Concepts on Software Defined Network and Its Future Prospects. *International Journal of Advanced Science and Technology*, 29(4s), 1142 - 1152. Retrieved from <http://sersc.org/journals/index.php/IJAST/article/view/6666>

[15] S. P. Bendale and G. V. Chowdhary, "Stable path selection and safe backup routing for Optical Border Gateway Protocol (OBGP) and Extended Optical Border Gateway Protocol (OBGP+)," 2012 International Conference on Communication, Information & Computing Technology (ICCICT), Mumbai, India, 2012, pp. 1-6, doi: 10.1109/ICCICT.2012.6398201.

[16] Tejeshwari Chouhan , Shailesh Pramod Bendale , Software Defined Network systems embedded with big data, *International Journal of Future Generation Communication and Networking* Vol. 13, No.2s, (2020), pp. 1591–1596

<http://www.sersc.org/journals/index.php/IJFGCN/article/view/29210/16269>

[17] Kshitij Chaudhari , Prof. Shailesh P. Bendale, An Initiative Study on Software Defined Cloud Computing, *International Journal of Future Generation Communication and Networking* Vol. 13, No.2s, (2020), pp. 1727–1732

<https://sersc.org/journals/index.php/IJFGCN/article/view/29233>

[18] Praneeta Dumbre, Shailesh P. Bendale, "Application of Blockchain in Software Defined Network", *International Journal of Future Generation Communication and Networking*, Vol. 13, No. 3s, (2020), pp. 1587–1593

<http://www.sersc.org/journals/index.php/IJFGCN/article/view/29394/16354>

[19] Ruchira Borkar, Shailesh Bendale, Software Defined Network (SDN) for 5G era an emerging Mega-trend, *International Journal of Future Generation Communication and Networking* Vol. 13, No. 3s, (2020), pp. 1579–1586

<http://www.sersc.org/journals/index.php/IJFGCN/article/view/29393>

[20] Patil, M.A., Jain, M.P., Ram, M.R., Vayachal, M.V. and Bendale, S.P., 2019. Software Defined Network: DDoS Attack Detection.

[21] Tiwari, S., Pandita, V., Sharma, S., Dhande, V. and Bendale, S., 2019. SURVEY ON SDN BASED NETWORK

INTRUSION DETECTION SYSTEM USING MACHINE LEARNING FRAMEWORK.

[22] Patil, A.S., Jain, P.S., Ram, R.G., Vayachal, V.Ne. and Bendale, S.P., 2018. Detection of Distributed Denial-of-Service

(DDoS) Attack on Software Defined Network (SDN).

[23] Dharmadhikari, C., Kulkarni, S., Temkar, S. and Bendale, S., 2019. A Study of DDoS Attacks in Software Defined Networks.

[24] S. Shah and S. Pramod Bendale, "An Intuitive Study: Intrusion Detection Systems and Anomalies, How AI can be used as a tool to enable the majority, in 5G era," 2019 5th International Conference On Computing, Communication, Control And Automation (ICCUBEA), Pune, India, 2019, pp. 1-8, doi:10.1109/ICCUBEA47591.2019.9128786

[25] Shivam Tiwari, Vanshika Pandita, Samarth Sharma, Vishal Dhande, Shailesh Bendale AN INITIATIVE WORK ON SDN BASED NETWORK INTRUSION DETECTION SYSTEM USING MACHINE LEARNING., Volume 7, Issue 04, Pages

1229-1233 <https://www.irjet.net/archives/V7/i4/IRJET-V7I4229.pdf>

[26] Prasad J.R., Bendale S.P., Prasad R.S. (2021) Semantic Internet of Things (IoT) Interoperability Using Software Defined

Network (SDN) and Network Function Virtualization (NFV). In: Pandey R., Paprzycki M., Srivastava N., Bhalla S., Wasielewska-Michniewska K. (eds) *Semantic IoT: Theory and Applications*. Studies in Computational Intelligence, vol 941. Springer, Cham. https://doi.org/10.1007/978-3-030-64619-6_18

AUTHORS



Miss Pranjali Kohinkar was born on 31st Dec 1999. She is pursuing her Bachelor of Engineering in NBN Sinhgad School Of Engineering, Pune. She completed her Diploma in Sou.Venutai Chavan Polytechnic, Pune.



Miss Aishwarya Kadam was born on 20th March 1999. She is pursuing her Bachelor of Engineering in NBN Sinhgad School Of Engineering, Pune. She completed her Diploma in Sou.Venutai Chavan Polytechnic, Pune



Miss Swapnali Kore was born on 20th Oct 2000. She is pursuing her Bachelor of Engineering in NBN Sinhgad School Of Engineering, Pune. She completed her Diploma in Government Polytechnic, Solapur.



Miss Mukta Kumbhar was born on 7th Aug 1998. She is pursuing her Bachelor of Engineering in NBN Sinhgad School Of Engineering, Pune.