A Survey on Face Recognition Monitoring Attendance System

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Abstract: *Due to the time-consuming nature and security risks of traditional techniques, automated attendance management systems are becoming more and more common in educational institutions. Such systems frequently employ the biometric technique known as face recognition. The integration of ubiquitous components in portable devices is used to develop an attendance management system that uses facial recognition technology for managing students' attendance. The hybrid feature extraction method used by this system combines CNN-PCA to provide a more accurate feature extraction method, creating a dependable and potent system for real-time face recognition. The proposed model in this study uses Eigen face values, Principal Component Analysis (PCA), and Convolutional Neural Networks (CNN) as face detection and identification techniques. The link between the database of student faces and the faces that were recognized are then compared. With this idea, the issue of proxies and fraudulent attendance should be resolved while also managing student records and attendance.*

Keywords: Principal Component Analysis, Convolutional Neural Network, face recognition, Attendance management system

REFERENCES

[1]G. Eason, B. Noble, and I. N. Sneddon, "On certain integrals of Lipschitz-Hankel type involving products of Bessel functions," Phil.Trans. Roy. Soc. London, vol. A247, pp. 529–551, April 1955.

[2]Brunelli, R., and Poggio, T., 1993, Face Recognition:Features versus Templates, IEEE Trans on PAMI, 1993, 15(10), pp 1042-1052 3.

[3]Cox, I. J., Ghosn, J., Yianilos, P. N., 1996, Feature-based face recognition using mixturedistance, Proceedings of IEEE Conferenceon Computer Vision and Pattern Recognition, 1996, pp.209-216.

[4]P.Wagh, S. Patil, J. Chaudhari,and R. Thakare, "Attendance System based on Face Recognition using Eigen face and PCA Algorithms," in 2015 International Conference on Green Computing and Internet of Things (ICGCIoT), 2015.

[5]Viola, M. J. Jones and Paul, "Robust real-time face detection.," in International journal of computer vision 57.2 (2004), 2004.

[6] Gomes, Clyde & Chanchal, Sagar & Desai, Tanmay & Jadhav, Dipti. (2020). "Class Attendance Management System using Facial Recognition." ITM Web of Conferences. 32. 02001. 10.1051/itmconf/20203202001. [cross ref]

[7] Omar Abdul, Rhman Salim, Rashidah Funke Olan-rewaju, Wasiu Adebayo Balogun. " Class Attendance Management System Using Face Recognition." 2018 7th International Conference on Computer and Com-munication Engineering (ICCCE) IEEE 2018. [cross ref]

[8] R. S. Siswanto, A. S. Nugroho and M. Galinium, \"Implementation of face recognition algorithm for biometrics based time attendance system,\" 2014 International Conference on ICT For Smart Society (ICISS), 2014, pp. 149-154, doi: 10.1109/ICTSS.2014.7013165. [cross ref]

[9] N, Dr &Tuladhar, Emerald & Shah, Avinash & Hegde, Anusha & Sai, Alekya. (2021). "ATTENDANCE MONITORING SYSTEM BASED ON FACE RECOGNITION." 10.13140/RG.2.2.26342.75845. [cross ref]

[10] S. Poornima, N. Sripriya, B. Vijayalakshmi and P. Vishnupriya, \"Attendance monitoring system using facial recognition with audio output and gender classification,\" 2017 International Conference on Computer, Communication and Signal Processing (ICCCSP), 2017, pp. 1-5, doi: 10.1109/ICCCSP.2017.7944103. [cross ref]

[11] E. Varadharajan, R. Dharani, S. Jeevitha, B. Kavinmathi and S. Hemalatha, \"Automatic attendance management system using facedetection,\" 2016 Online InternationalConferenceon Green Engineering and Technologies (IC-GET), 2016, pp. 1-3, doi: 10.1109/GET.2016.7916753. [cross ref]

[12] Saravanan, Sharma &Shanmugasundaram, Karthikeyan & Ramasamy, Sathees. (2016). FAREC — "CNN based efficient face recognition technique using Dlib." 192-195.10.1109/ICACCCT.2016.7831628.[cross ref]

[13] Akash Singh, Shreya Bhatt, Abhishek Gupta, International Journal of Engineering Applied Sciences and Technology, 2021 Vol. 5, Issue 12, ISSN No. 2455-2143, Pages 233-241 Published Online April 2021 [cross ref]

[14] Nandhini R, Duraimurugan N, S.P.Chokkalingam, International Journal of Engineering and Advanced Technology (IJEAT) ISSN: 2249 – 8958, Volume-8, Issue-3S, February 2019 [cross ref]

[15] Prof.M.S.Sawane, ShrutikaNakhale, Vishal Rathod, Nikita Ghadge, International Journal of Advanced Research in Computer and Communication Engineering Vol. 10, Issue 5, May 2021 DOI 10.17148/IJARCCE.2021.10584 [cross ref]

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