iJRASET
International Journal For Research in Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 10 **Issue:** VI **Month of publication:** June 2022

DOI: https://doi.org/10.22214/ijraset.2022.44156

www.ijraset.com

Call: 08813907089 | E-mail ID: ijraset@gmail.com

International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 10 Issue VI June 2022- Available at www.ijraset.com

Missing Child Identification Using Deep Learning and LBPH Algorithm

Soma Sekhar G[1], Madhav B[2], Sunil B[3], Sravani G[4]
Dept. Of CSE, CMR Technical Campus

Abstract*—Crimes are at rise and turning into hard for police to become aware of and rescue the Missing Persons. Our Proposed System will use Face Recognition Algorithms and could have the capability for IRIS recognition as well to detect Missing Persons. Face Recognition begins with extracting the coordinates of features such as width of mouth, width of eyes, pupil and comparing the result with the measurement stored in the database and returning the closest record. Nowadays, face recognition techniques are growing around the world. We will be using advanced algorithms like LBPH for our system and also compare to other older algorithms to prove higher accuracy of our system. We will be building a web based system integrated with Backend Machine Learning server. The Backend ML system will handle all the search, detection and recognition using our face recognition and Iris Recognition Model and all the data stored in the database.
Keywords— Face Recognition; LBPH algorithm; Iris detection; Deep Learning; Extraction;Opencv

I. INTRODUCTION

As we recognise that India is the second largest country in the world if it involves population. And there are numerous kids amongst us. As there may be a great saying "TODAYS CHILDREN ARE TOMORROW'S CITIZENS", So as a citizen of India it is our responsibility to save our children from kidnappings or missing in crowd places and any religious or social gatherings etc. As per the survey on an average of 175 children are missing every day and Half of them were being untraced.

II. LITERATURE SURVEY

The proposed method is primarily based totally on identification of the face and iris of the missing child. The earliest strategies for face recognition commonly used CNN.However , features extracted using a LBPH for getting facial representations give better performance in face recognition. Iris of the missing child is also detected in the proposed system. For iris detection we are using a gabor filter.Here within the portal public can upload the iris and face images to identify the missing child.

III. PROPOSED SYSTEM

We will be building a web-based system integrated with a Backend Machine Learning Server. It will allow users to login, upload details of a missing child , browse for a missing child, search for a missing child. The Backend Machine Learning system will handle all the detection and recognition using our face recognition and iris recognition model and all the data stored in the database. We will be using advanced algorithms like LBPH for our system and also compare to other older algorithms to prove higher accuracy of our system. We will be using theGabor filter algorithm to extract the features of IRIS of individual missing children which can be used for IRIS recognition.

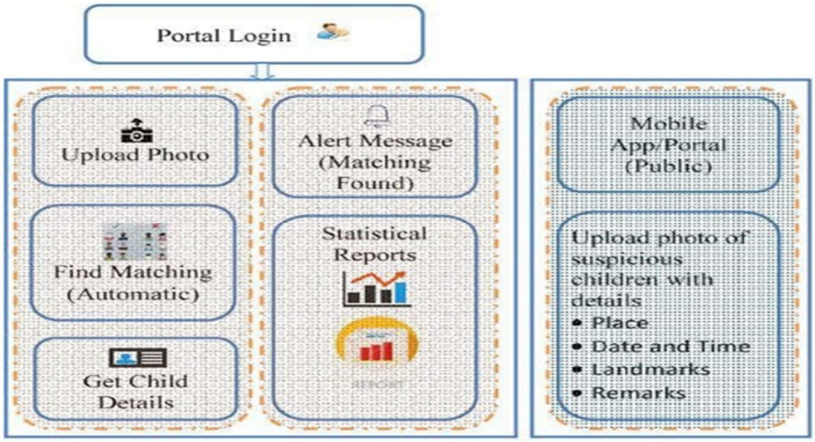


Figure 3.1: Architecture of the model

IV. RESULT

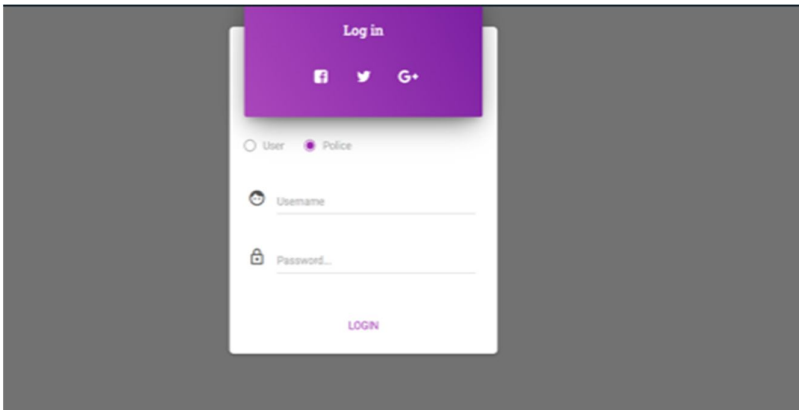


Figure 4.1 : Login page

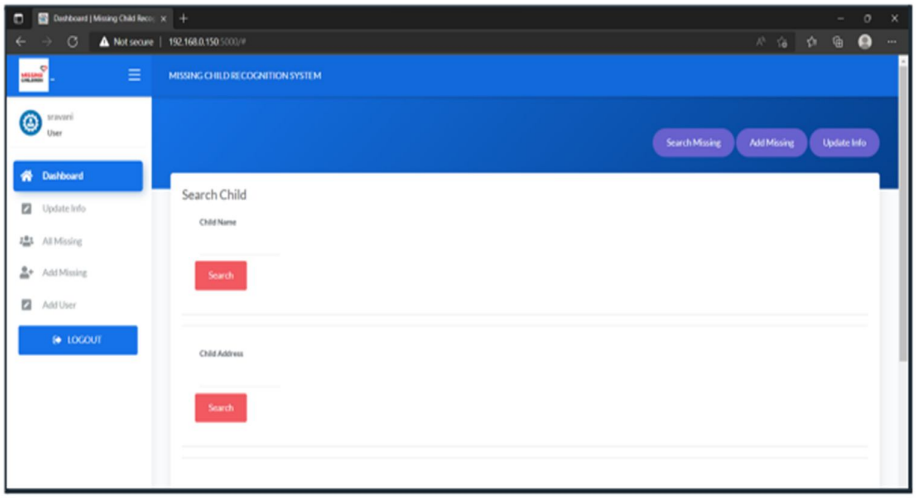


Figure 4.2: Searching missing child

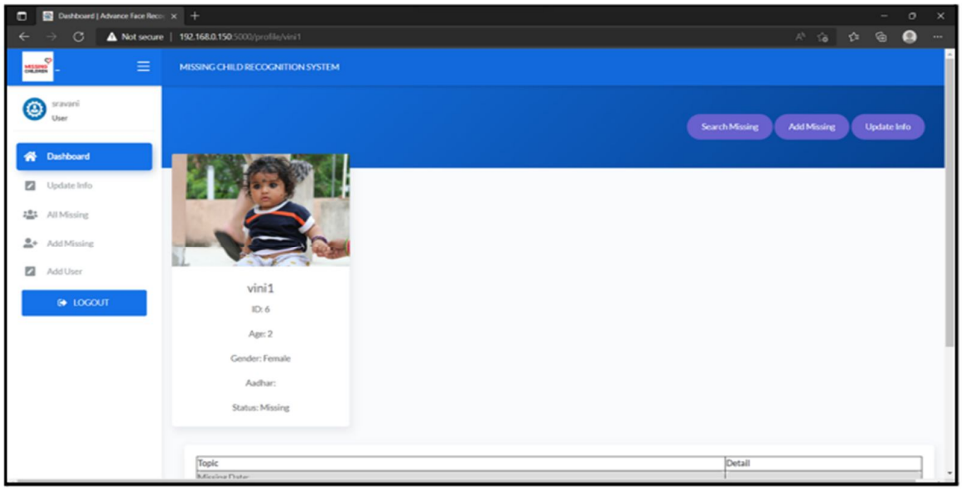


Figure 4.3: missing child details

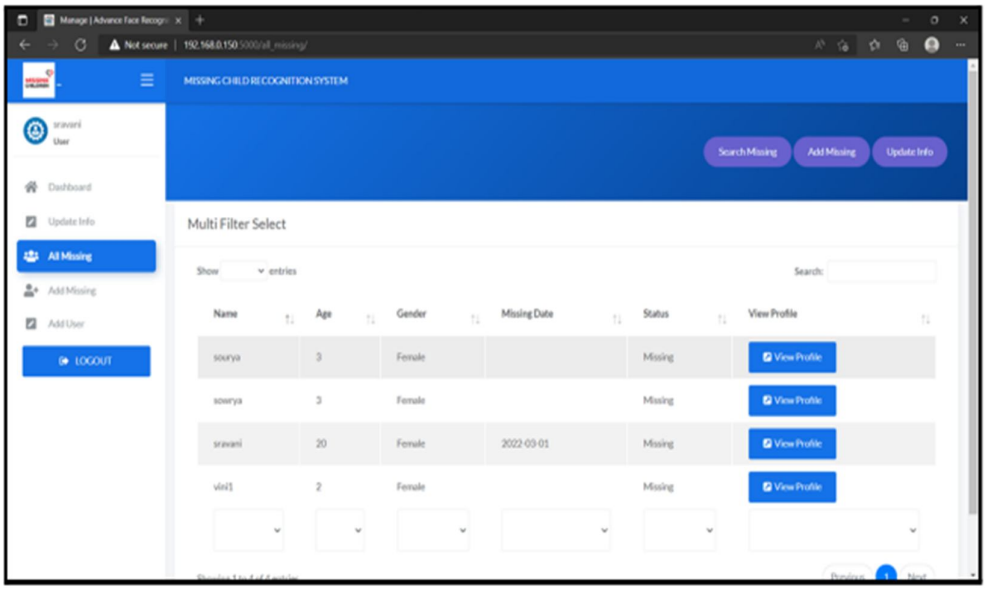


Figure 4.4 All missing child details

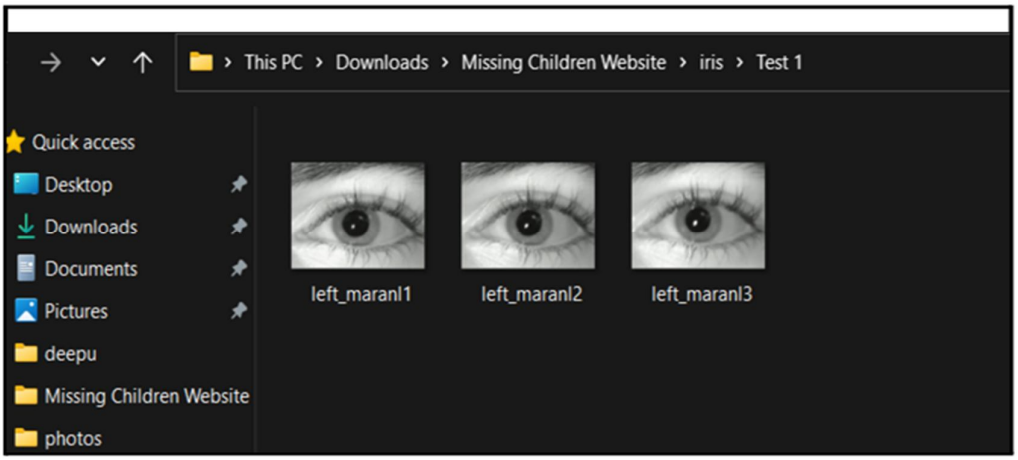


Figure 4.5 : Iris images

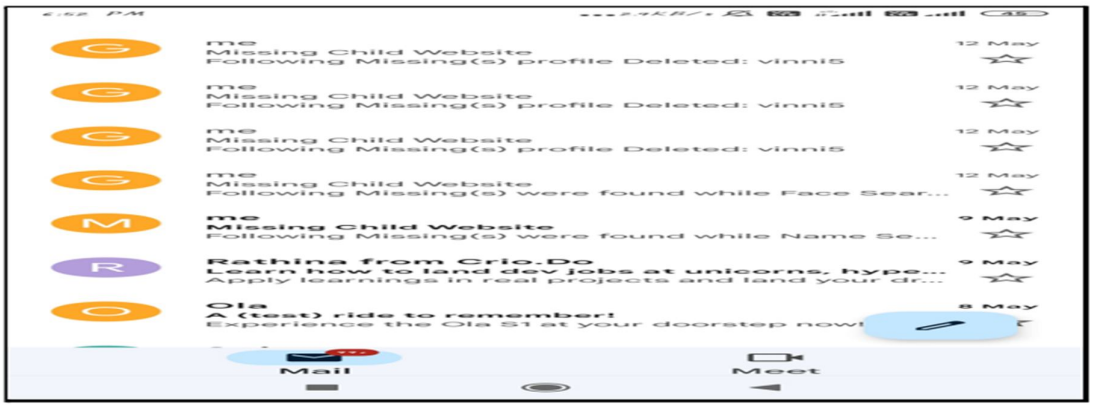




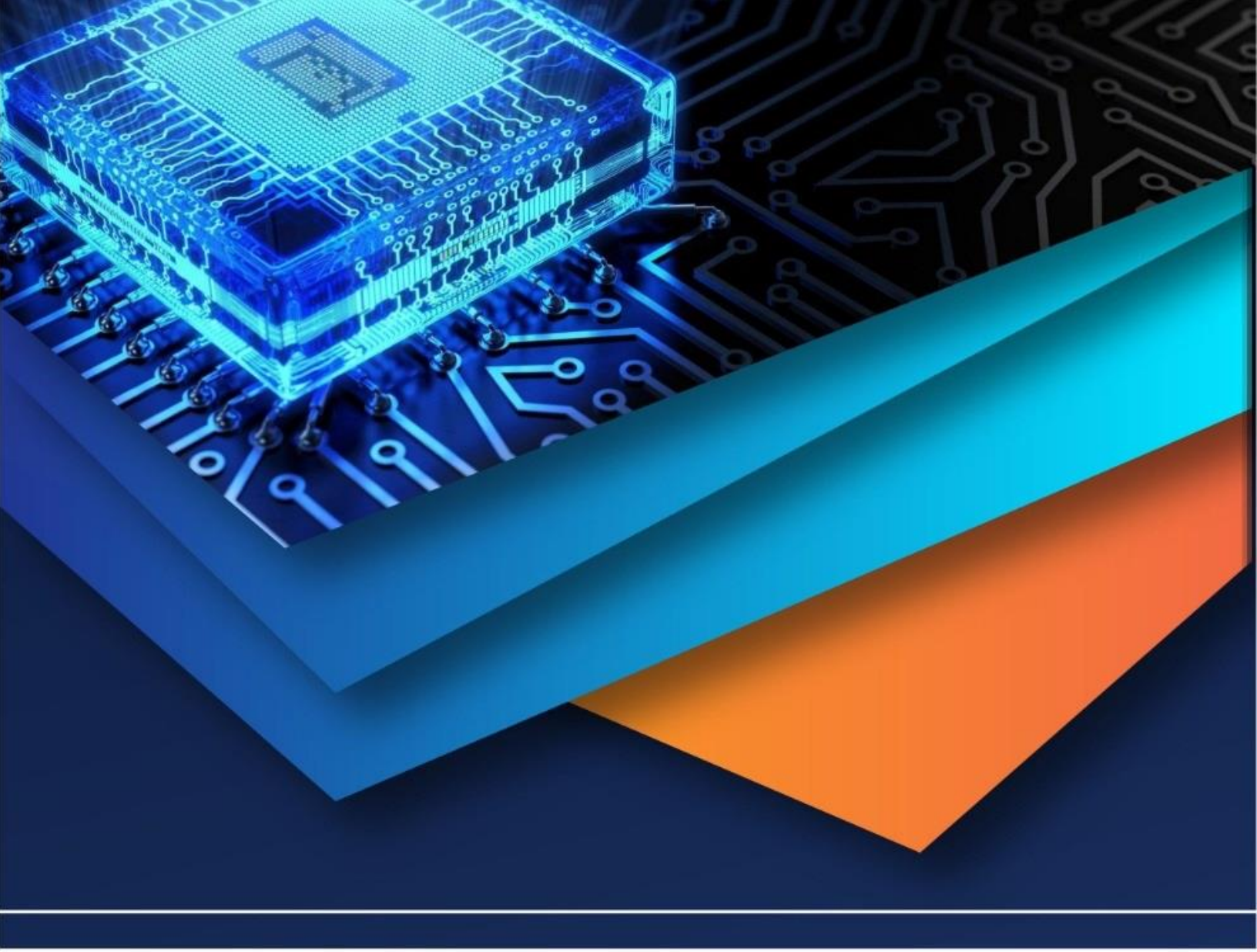
Figure 4.6 : Email notification

V. CONCLUSION

A missing child identification system is proposed, which combines facial feature extraction based on deep learning and matching based on LBPH. We use the Gabor filter for iris detection. The classification achieved a higher accuracy of 90% which proposed methodology of face recognition could be used for reliable missing children identification.

REFERENCES

[1] Y. LeCun, Y. Bengio, and G. Hinton, "Deep Learning", Nature, 521(7553):436-444, 2015.
[2] O. Deniz, G. bueno, J. Salido, and F.D. la Torre, "Face Recognition using histogram of oriented gradients", Pattern Recognition Letters, 32(12):1598-1603, 2011
[3] C. Geng and X. Jiang, "Face recognition using shift features", IEEE International Conference on Image Processing (ICIP), 2009
[4] Rohith Satle, Vishnuprasad Poojary, John Abraham, Shilpa Wakode, "Missing child identification using face recognition system", International Journal of Advanced Engineering and Innovative Technology (IJAEIT), Volume 3 Issue 1 July-August 2016
[5] https://en.wikipedia.org/wiki/FindFace
[6] https//www.reuters.com/article/us-china-trafficking-apps/mobileapp-helps-china-recover-hundreds-of-missing-childrenidiUSKBN15J0GU
[7] Simonyan, Karen and Andrew Zisserman, "Very deep convolutional networks for large-scale image recognition", International Conference on Learning Representation (ICLR), April 2015
[8] O. M. Parkhi, A. Vedaldi, and A. Zisserman, "Deep Face Recognition, "in British Machine Vision Conference, vol. 1, no.3, pp.1-12, 2015
[9] A Vedaldi, and K. Lenc, "MatConvNet: Convolutional Neural Networks for MATLAB", ACM International Conference on Multimedia, Brisbane, October 2015



10.22214/IJRASET

45.98

IMPACT FACTOR: 7.129

IMPACT FACTOR: 7.429

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089 (24*7 Support on Whatsapp)