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Secure Face Matching Authentication for Online Transactions

Mr. Arun M[1], Manjula R[2]

[1]Assistant Professor, Department of Computer Science, Sri Krishna Adithya College of Arts and Science, Kovaipudur, Coimbatore, Tamil Nadu, India
[2]Department of Computer Science, Sri Krishna Adithya College of Arts and Science, Kovaipudur, Coimbatore, Tamil Nadu, India
manjulamanju3622*@gmail.com*

ABSTRACT:

This project entitled as "Secure Face Matching Authentication for Online Transactions" which is based on the face authentication scheme for secure online transactions. Today all the transactions, payments, applications, purchases and etc are performed using the internet only. All the online credentials are based on the basic credentials like username, password only. Existing system is a text based authentication. This kind of text based authentication is not checking the persons who are doing the transactions in front of the system it is checking only the credentials which the users entering. The proposed system is focusing on the throughout authentication scheme that is from login to logout time.

This system about the authorized person's face detection for throughout session (From login time to logout time).The Web camera placed in front of the system in which they are working that camera will capture the face of the authorized person if the person start to move from the camera the capturing process will struck and the transaction will not allow the unauthorized persons to work.

This application is fully applied with the camera. Once the person wants to do the transaction then he should sit in front of the camera and the face is authenticated for further steps. The camera will continuously monitor the face to avoid in authenticate transactions. If the user tries to move from the camera then the transaction will not be continued. It will get struck. So, user should be there until he/she finishes the transactions. This project utilizes face matching algorithm and canny and Sobal algorithm for edge detection.

Keywords Face matching ,Online transaction, Face detection, Sobal algorithm

Introduction

Biometrics has nowadays been of universal interest and has been developed and used for many purposes such as for the detection of criminals and undesirables, identification and access control. Within this project, Facial Biometric Systems are used for User Authentication Based on Face Recognition. The system proposes a framework that combines continuous user authentication with a conventional identification method (such as password authentication or face authentication), which authenticates the user at the initial log-in session. In general, this needs to pre-register the information as an enrollment template before it use a biometric system. Most face detection systems carry out the task by extracting certain properties (e.g., local features or holistic intensity patterns) of a set of training images acquired at a fixed pose (e.g., upright frontal pose) in an off-line setting. To reduce the effects of illumination change, these images are processed with histogram equalization or standardization (i.e., zero mean unit variance). Based on the extracted properties, these systems typically scan through the entire image at every possible.

Overview of Proposed System

The drawbacks, which are faced during existing system, can be eradicated by using the proposed application.

The main objective of the proposed system is to provide a user-friendly with more security for banking transaction. Proposed application provides face match authentication using face matching algorithm. Admin can login through this website after login admin can create bank account details to user. For create bank account user need to give basic information along with face image. This face image will capture through camera. After completing the registration user can authenticate using face. Once Authentication Success user can do online secure transactions.

Advantage

- Authorized users only allowed doing the transaction.

- Throughout authentication is possible.
- Can avoid the intrusions and false transactions.

ALGORITHMS (face feature extraction and matching)

1) Image Capture – It is the step where image of the person is captured wherein his or her face is visible. In case of 2D facial recognition, a digital camera with normal resolution is needed.

2) Face Detection – Face detection involves identifying the face in the captured image. In simple words only the face of the person is seized & all other parts of the images are eliminated.

3) Alignment – The face captured in the camera may not be completely perpendicular to the camera and hence the alignment needs to be determined and compensated so that it is ready to use of recognition process.

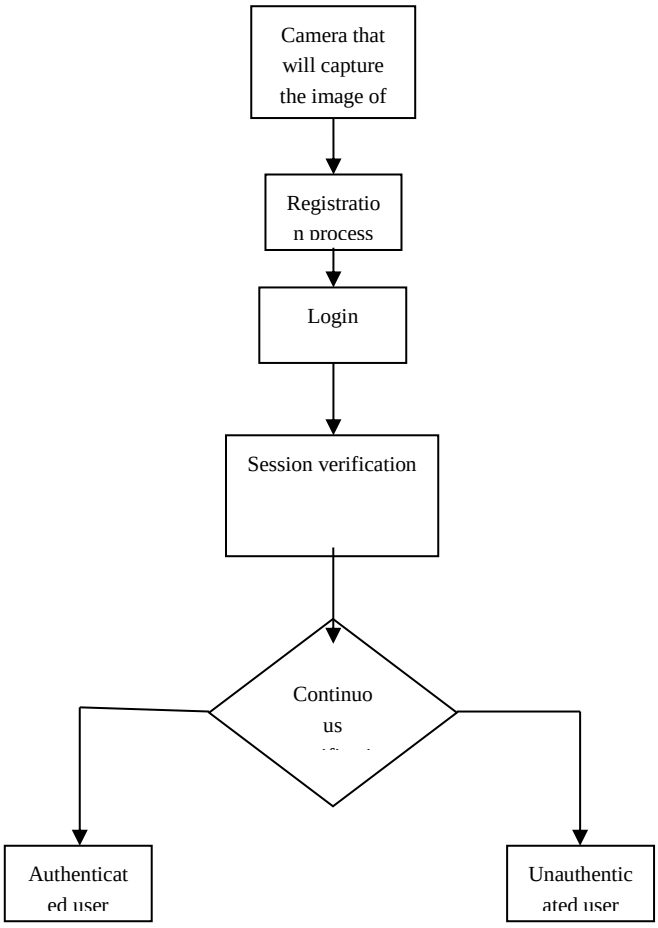
4) Feature Extraction – Feature extraction involves a process of measuring various facial features and creating a facial template, for the purpose of matching and identification.

1. Key point detection
2. descriptor establishing, and
3. Image feature matching.

Methodology

Flow diagram:

System Flow Diagram



TBL Login

This Table consists of admin login to this application. So that admin can login and access the portal using username and password

TBL Add Product

This table consists of product id, name, price image details, and specification details. Here product id is a primary key

TBL Booking info

This table consists of result details table consists of user booking the product id, name, quantity details, payment details along with status result . Here booking id is a primary key

LOGIN

Admin

Serial no	Form	Test case	Expected result	Actual result	Final Result
1	Admin form	Without any key input click the login button	Please enter username and password	Please enter username and password	pass
2	Admin form	Without any proper key input click the login button	It should show key invalid.	It should show key invalid.	Pass
3	Admin form	If we pass Proper key input click the button	Its moves the admin form	Its moves the admin form	pass

REFERENCES

Savvides, Marios, BVK Vijaya Kumar, and Pradeep K. Khosla. \"Cancelable biometric filters for face recognition.\" Pattern Recognition, 2004. ICPR 2004. Proceedings of the 17th International Conference on. Vol. 3. IEEE, 2004. Q. Yin, X. Tang, and J. Sun, "An associate predict model for face recognition," in IEEE Conference on Computer Vision and Pattern Recognition, June 2011, pp. 497–504. R.S.Choras. "Facial feature detection for face authentication," in the Proceeding of IEEE Conference on Cybernetics and Intelligent Systems., 2013, pp.112-116. S.Liao, A. K. Jain, and S. Z. Li, "Partial face recognition: Alignment free approach," IEEE Transactions on Pattern Analysis and Machine Intelligence, vol. 35, no. pp. 1193–1205,2013.5. ICIIBMS 2015, Track1: Signal Processing, Computer Networks and Telecommunications, Okinawa, Japan 978-1-4799-8562-3/15/$31.00 ©2015 IEEE Enhancing User Authentication of Online Credit Card Payment using Face Image Comparison with MPEG7-EdgeHistogram Descriptor.

Books Referred:

- Alex Homer , **'Professional ASP.NET 1.1'**, 2004 Edition, Wrox Publications
- Clayton crooks II **'Learning Visual Basic .Net Through Applications'**
- Roger S Pressman, **'Software Engineering'**, 2000 Edition, Dreamtech Publications
- Steven Holzner, **'Visual Basic.NET Black Book'**, 2003 Edition, Dreamtech Publications

Websites:

1. www.msdn.microsoft.com
2. www.vbcity.com
3. www.vbdotnetheaven.com
4. www.codeproject.com
5. www.dotnetjohn.com