

Palm Print Recognition: A biometric Identification Technique

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ABSTRACT

Article Info

Volume 7, Issue 3

Page Number: 637-640

Publication Issue :

May-June-2021

Article History

Accepted : 20 June 2021

Published : 30 June 2021

Biometric technology classified into two stanzas as authentication and second one is identification this is majorly used in various fields or different- different applications because it verifies the data with help of other rectification technique. Here, we face so many difficulties which play an essential role in rectification process such as the disturbance in picture, blurring, not cleared the minutiae points and picture superiority. Here we use some algorithm which boosts up the algorithms and performance of recognition. This process is very efficient to rectify any of the documents and it is also been good to detect the features or attributes in terms of security.

Keywords: Biometric, Palm print, Features, Fingerprint

I. INTRODUCTION

User identification process is highly recommendable for human being because it is basically based upon the physiological attributes and Behavioral attributes. It consist mainly these two factors and it is shown as in Figure 1

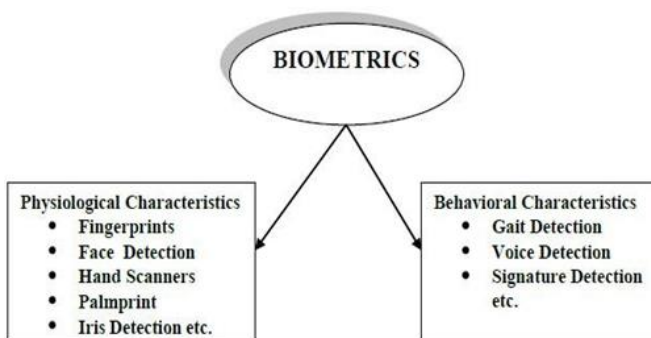


Figure 1. Biometrics Attributes

Biometric technologies are becoming day-by-day a popular authentication process only because of its verification process. With an augment in level of breaking safety precautions and transaction-frauds, there is need for highly locked identification and personal verification technologies are becoming clear. In today's era there are so many hackers are there which detect the system with help of its hacking so to prevent it we use the highly probable authentic technology and it is only the palmprint biometric feature.

Nowadays, in all over the world this feature of biometric is extend frequently because if we see its storage of data which consist the personal information of any user. Accordance with the any user if we see the data of any stored file then it need high security and this biometrics technology gives

the easily available path to accommodate the data in term of new dimension. As we see day by day the hacking attacks are increasing and it may hack our system or hack our data. And in today's generation as we see different hackers use that type of algorithms which we cannot imagine ever and stole our data with use of algorithm as they break the passwords of user in fact in this so many safety procedure they follow. Then to prevent from these hacking we use the proper authentication process and the palmprint biometric is the best method to resolve out from all problems.

There are two ways by which biometric authentication is processed as shown in Figure 2.

Verification: This evaluation process of one-to-one confined detailed information to recognize the pattern from stored data that any of one can assert to verify the match. And if match is found then the user is validated.

Identification: It is an evaluation of one-to-many and from this it identifies the path to the user and accommodated the person or human being identification through this process.

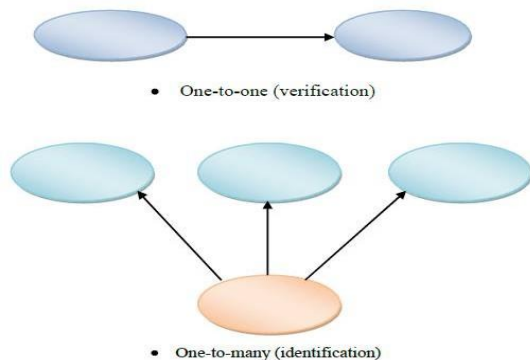


Figure 2. Approaches of Biometrics

II. Related Work

This process involves the so many methods to detect the hand palm and it is suggested that it achieves

high accuracy [1] to the data of various fields as we see in Figure 3. It covers mainly it five processes are picture registration, Raw data for processing, Mapping feature with locally and globally, enrollment process from the storage of data and mapped data and gives output whether the human being's is same or any other. The goal of raw data for processing stanza is augmenting the picture quality plus eradicate its needless components take it from the picture. In the palmprint authentication process it includes the extraction and transformation process by using phase based matching algorithm [2]. The extraction of feature mapping should be identified and it creates the path to identify the features of palm to accumulate the technique of biometrics authentication technique.

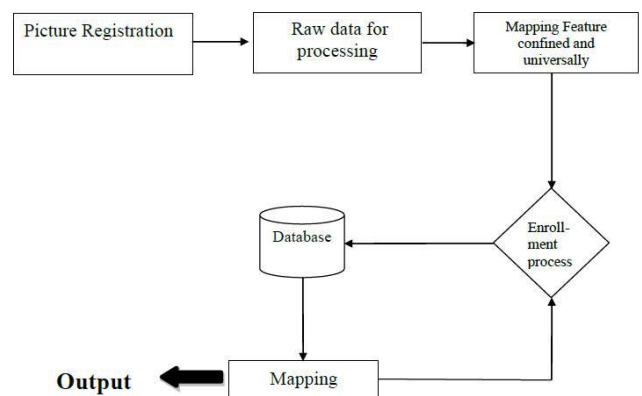


Figure 3. 2D & 3D image based reading system for palm recognition

There are few others image processing techniques were used earlier in this field [4-6].

III. Methodology

Generally the raw data which is processed in the authentication then it follows some phase-based algorithm [3] to provide accurate identification to the user. It follows five steps to authentic the data are as:
 i Convert the image in binary format
 ii Edge following
 iii Distinguished the minutiae terms

iv Coordinate with system to remove distortion v Focus on the middle part of the format

If we see in Figure 4 then in a) it shows the minutiae terms of a picture b) upload it and processed the raw data. In authentication almost first and second method is common because firstly we collect the data then we upload the image for processing. But in third step there is processing acquired because we generally here identifies and mapped the feature for the authentication process. It generally involves the rectangular region of the palm and then modifies it in terms of $(f1, x1)$ and $(f2, y2)$. Then it checks all the minutiae points of the data and according this it gives the distinctions to the provide data.

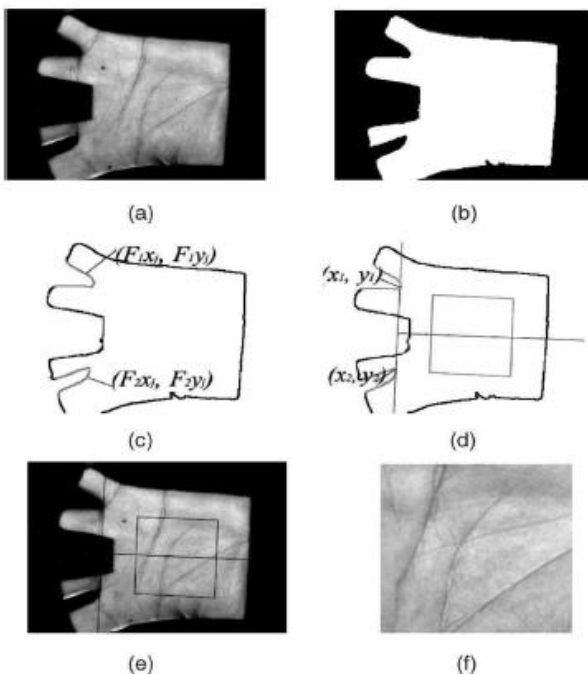


Figure 4 a) the main terms to upload raw data and then processed a) Real Image, b) convert in 0 and 1 format c) Edge following, d) remove the distortion, e) extorting the middle part of picture and f) and output.

Due to the identical clarification and predetermined background with earlier known constraints, it is effortless to fragment out the hand using Otsu's method. This scheme or we can say a method chooses the verge to diminish the class discrepancy of the two

groups of pixels which is detached by verging operator.

Mapping Feature of processing

In this feature it contains the various efficient terms and it basically generates that type of term which contains the data which is not simulating to others user data or any of information. In this term it process the mapping algorithm to occupy the correct points as minutiae points, crease line, wrinkles etc [3]. It mainly refer that when the data is in minutiae feature then it extend its size as we take any of the data and then manipulate it when the feature is established and firstly take that region of palm which is highly achievable the authenticity rate and clear the view of the data of that part which we pretend for the authentication. After that when the process is done then takes an image and start to match data from one other human being. As we see in the figure 5 as the time rate of mapping attributes is increasing rapidly. The path of the palm restoration use of 2-D integration function $xy2Da$ after the achievement of procedure and region of interest segmentation from palmprint is arises.

Here the term is detect are: $dA = dx*dy$

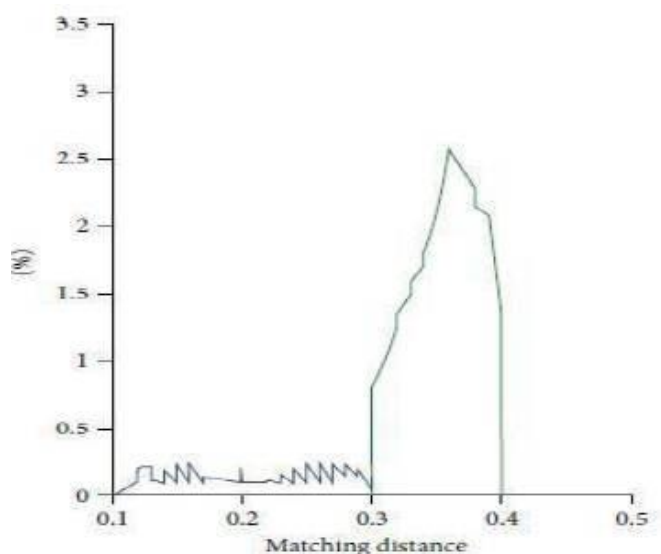


Figure 5. Using Hamming concepts using IF in mapping

As we see in this the graph is continuously increasing day by day and it sets the path to occupy this recognition technique is familiar all over the world and it manipulate the data which is not necessary for this procedure.

IV. CONCLUSION

In these days there are so many tools available to capture an object like generic web cameras with embedded laptops and mobile cameras available these days. And these capturing devices are low in quality as compared with other devices. The data contained in these low quality images is further distorted by the presence of illumination and contrast variations due to surrounding and also due to the pose variations induced by the improper template presentation by the user. These image degradations prove to be critical for the process of person authentication since even small details in appearance contribute to identifying an individual uniquely.

V. REFERENCES

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Cite this article as :

Abhilove Kumar, Apoorv Mishra, "Palm Print Recognition : A biometric Identification Technique", International Journal of Scientific Research in Computer Science, Engineering and Information Technology (IJSRCSEIT), ISSN : 2456-3307, Volume 7 Issue 3, pp. 637-640, May-June 2021. Available at doi: <https://doi.org/10.32628/CSEIT2173182>
Journal URL : <https://ijsrcseit.com/CSEIT2173182>