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PROBLEMS OF PERSON RECOGNITION BASED ON EAR PLUMB IMAGE IN ENSURING SECURITY

Anvarjon Abdujabborovich Mahkamov
International Islamic Academy of Uzbekistan, Senior Teacher of the
"Department of Modern A.Kadiri, Tashkent, 100011, Uzbekistan ICT"
mahkamovanvar2020@gmail.com 11,

Abstract
This article provides a brief overview of the classification of threats to websites by level. The above information helps us to closely study the threats to websites. The user can anticipate and control threats to websites. It detects and eliminates illegal activities, harmful situations and certain types of risks.

Keywords: web sites, threats, classification of levels, security.

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Introduction

The effectiveness of the system of recognition of the person based on the image of the ear cup is related to the preliminary processing of the image of the ear cup, the identification marks extracted from the image of the ear cup and the organization of the person recognition process based on these marks.

Preprocessing, feature extraction, and identification are complex recognition problems that form the basis of recognition systems.

Solving these issues involves solving several problems that arise.

Below are some of the problems that exist in preprocessing, distinguishing identifiers, and identification:

Problems in solving the initial processing problem:

- that the photography was not carried out under the required conditions;
- non-fulfillment of requirements for image clarity, brightness, contrast and saturation levels;
- the presence of noise and interfering objects in the image;
- non-fulfillment of the requirement for the smallest size of the image (the minimum requirement is 800x600);
- the presence of persons other than a single person in the image;
- hold the camera to the earlobe as much as possible 4^0 failure to meet the requirement to place perpendicularly in error;
- non-fulfillment of the requirement of dependence of the area of the auricle on the entire image area (the area of the ear cup should not be less than 20% and not more than 40% of the entire image area);
- non-fulfillment of the requirement that the color of the image of the ear cup be different from the background color;
- the presence of light rays and strong black shadows in the image.

Problems in solving the problem of extracting identification marks:

- the presence of shadows of the head or other objects in the background of the image;
- the presence of hair, dandruff and other things that block the image of the ear cup;
- non-fulfillment of the requirement to fully reflect the image of the eardrum of the person being identified in the obtained image;
- non-fulfillment of the requirement to clearly isolate the area where the ear is located;
- non-fulfillment of the requirements for the image to be free of spots and interferences;
- non-fulfillment of the requirements for high resolution separation of image contour lines;
- non-fulfillment of the requirement that there are no additional interference points along with the separated contour lines.

Examples of images that meet and do not meet the requirements for preprocessing, feature extraction, and identification are shown in Figure 1.1.

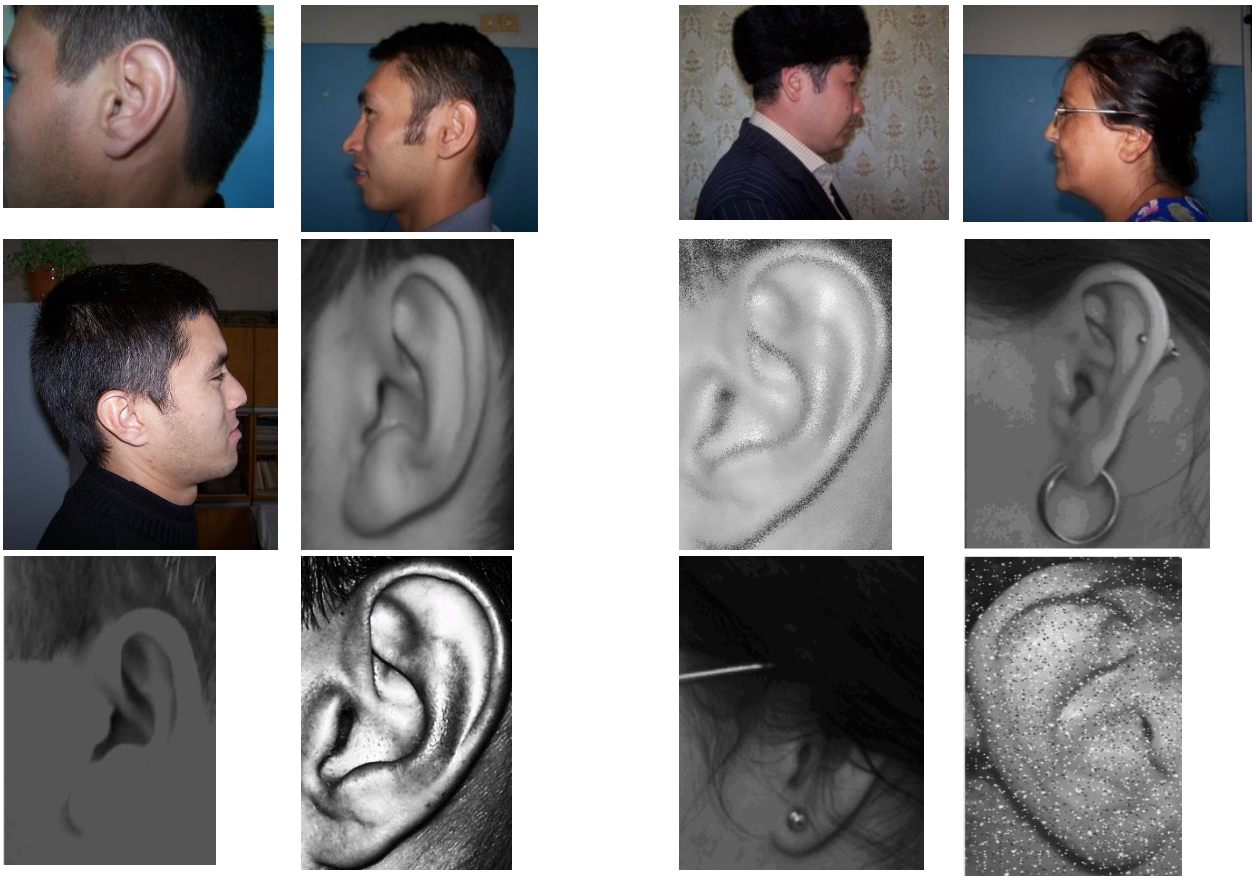

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Figure 1.1. a) images free of obstructions, b) Images with blocking effects

Problems in solving the problem of recognition:

- non-fulfillment of the requirement to distinguish identification marks with high accuracy;
- non-fulfillment of the requirement to determine the number of parameters of recognition algorithms and their optimal values.

The description of the existing approaches to solving the above-mentioned problems is presented in the 2nd chapter of this thesis, in which new approaches to solving some problems are proposed.

Conclusion

Based on the conducted experimental studies, it can be said that the directions of recognizing the person on the basis of biometric technologies mentioned above are considered very important nowadays. Because at the same time, ensuring security in various objects and access systems is becoming one of the urgent issues. Therefore, it is appropriate to use biometric technologies of the person in order to ensure security by this time.

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