"RELIABLE PROVISION OF HUMAN SAFETY ON SMART ROADS"

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Annotation: *This article will talk about the role of face recognition technologies on smart roads and its role in ensuring human safety.*

Keywords: *Face Recognition, Smart Tehnologies, camera, face analysis, fake face.*

Registration of a document passport confirming the martyrdom of citizens, taking into account modern international standards and requirements in our country, as well as documents of movement on the territory of the Republic to stateless persons, in order to further improve the procedure for issuance and replacement, the decree of the president of the Republic of Uzbekistan dated January 5, 2011 No. 4262 "on additional measures to improve the passport system in the Republic of Uzbekistan" and the decree of the president of the Republic of Uzbekistan dated September 22, 2020 "on measures to introduce identification ID cards in the Republic of Uzbekistan" PF-6065 " was adopted.

According to this, it is known to all of us that from January 1, 2021, all newborns, citizens of Uzbekistan and stateless martyrs and foreign citizens permanently residing in the territory of Uzbekistan began to be issued an identification ID card as a document confirming the identity and citizenship of the owner of the document for a period of 10 years instead of a biometric passport.

In addition, the resolution of the Cabinet of Ministers dated March 2, 2017 No. 116 "on measures to introduce new samples of the National driver's license and the certificate of registration of the automototransport vehicle" has now been approved, as a result of the replacement of driver's licenses in places throughout the Republic, an electronic list of the entire

In the Johon experiment, the census is considered to be a periodic process of collecting and processing data on a person, carried out throughout the territory or in certain areas of it, determining the demographic and socio-economic characteristics of the population on the specified date.Based on this process, the main purpose of the census is to obtain reliable and impartial information about the state and dynamics of population development in the Republic of Uzbekistan, necessary for the establishment and implementation of priorities of state policy in the field of socio-economic and socio-political development of the country.

A number of forecasts are achieved by expanding the database for assessing changes in the demographic situation in the country and listing cities and other settlements in the long-term, medium- and short-term periods of socio-economic development, the placement of labor resources and their use, through measures to strengthen the health of the population, improve the living conditions of women and children, In addition, it should have a database due to the introduction of the current account, calculations and forecasts of the population and its composition in the period between censuses.The population census of the Republic of Uzbekistan should be conducted centrally based on the creation of a unified management system, and data analysis, information exchange, separation in qdrov, search for martyrs suspected of crimes, and information from a centralized crime prevention system are relied upon.It provides the information that is given to us to the central system by automatically localizing the human face in an image or video recording and, if necessary, identifying the identity of a citizen based on existing databases and synthesizing the human image based on artificial intelligence. It is an opportunity to combine and cover existing images in video recording. That is, it should have the ability to" identify the identity of citizens who have been noticed by cameras integrated with the database system." It is known that scientists learn to recognize human emotions based on artificial intelligence. Throughout a person's life, this ability is preserved, and we can easily distinguish familiar Czechs and determine a person's mood with one facial expression. With other skills, scientists had to "digitize" over time to give this ability to machines, which is now a reality.In this regard, the Automatic Identification System on the territory of Uzbekistan since November 2017, all internal affairs employees have been able to obtain personality information using tablets with a program for face recognition and fingerprint recognition.However, in the crowded places where there is a large accumulation of ordinary morality at the intersection of charrokha and Kham (market unversitet kinotiator and various sayilgohs), the practice of using this system of technology is left behind by Khali Hamon. Face recognition is the practical application of image recognition theory that will have a high effect in our country, and the task of this technology is to automatically localize the face in the photo and, if necessary, identify a person by face.

The use of HD or high resolution cameras in system implementation has a high effect in determining all faces in the crowd. Each passenger passing by the camera seals a biometric map of his face on the photo. With the signs characteristic of that person himself, the rules that a person uses to determine the face are based on factors that are important for a person to focus on, from the forehead part to the

engak (daxan) parts. Feature of the system is the presence of recognition of parts of the face, nose, mouth, eyes in the image based on algaritmour.

The principle of operation of Face Recognition Systems recently, the development process of new technologies, such as face recognition, has improved in Yaa. More than 10 years have passed since the first developments in this area were presented, and during this time new promising opportunities have already appeared. With all this, the development of technology has taken a step much further.

To what extent has the advantages of face recognition in the modern world advanced the role of artificial intelligence. The main achievements in this area in recent years are only in Talay.

The essence of the technology is that mathematical points are placed on the face in the video image, and the use of servers with software for detecting node points and measuring the distance between them, or special cameras with face recognition under study, allows you to map the face and get a face copy. Depending on the technology, the system must set about 80 such points for this.

The next approach is to use the invariable properties inherent in the human face image. It is based on empiricism, that is, on the fact that the device seeks the system to "think, think" like a person. The system reveals the characteristic parts of a person's face, its border, change in shape, contrast, etc., combining and checking all these features. This approach can even be used when turning the head.

The algorithm focuses on human face recognition using the templates it defines in its development. The face is not represented by a specific mold and template or standard, and the purpose of the algorithm is to check each segment for the presence of this template, and verification must be carried out for different angles and scales.

Technologically, systems can sometimes make a big difference in terms of face recognition, but they all have roughly the same performance effects.

Stage 1: face recognition

First of all, the camera is the identification of a person's face, alone, at the same time he is acting, or among people. The device does its job at a qualitative level when a person looks at the face, usually directly at the camera, but modern technological advances have the ability to detect the human face from the side (within certain limits, of course).

Stage 2: Face analysis

A photo of the face is taken and the application starts the analysis. Basically, facial familiar actions use 2D images instead of 3D images, as they can be digitized

and customized with a 2D photo database. Considering the application of IP cameras for face recognition, it is necessary to pay special attention to some devices and its images. Two-dimensional 2D face recognition technology will be based on flat two-dimensional images. Face recognition algorithms are anthropometric measurements, dimensions and shapes of the human body, facial parameters, face models, as well as elastic 2D face models, as well as facial images represented by a certain set of physical or mathematical properties.

2D image recognition is one of the most demanded technologies at the moment. Because the main databases of individuals collected and identified in the world relied on two-dimensional data. The main video camera devices installed around the world correspond to the 2D account. Therefore, the main requirement falls on 2D face recognition systems.

The rapid development of technology in the photo led to the maximum increase in efforts to improve 2D technology. Researchers from the Universities of Nottingham and Kingston presented a project for 3D reconstruction of a human face based on a single image. A neural network in which many 3D models and simple images of people were conducted recreates the 3D faces of people based on only one two-dimensional image of the face.

Each face is made up of characters that stand apart and specific points on the face. There are 80 anchor points on the human face. The facial recognition program analyzes key points such as the distance between your eyes or the shape of your cheekbones.

3D recognition (Three-dimensional face recognition-English) is a program created for implementation in three-dimensional images. This technology is distinguished by the fact that 3D face recognition has high quality characteristics.

Currently, there are several types of 3D scanning technologies, laser scanners that calculate the intermediate distance of elements of the human surface in the scanner, and special scanners that mathematically process linear folds using a system of the surface of the human face should be introduced taking into account the application of both synchronous processing photogrammetric methods of facial images.

STEP 3: CONVERT IMAGE TO DATA

After that, face analysis begins its process based on its mathematical formula. Facial features convert into digital code. This digital code is called the face trace. Just as there are specific structures on human fingers, the presence of a specific facial structure of each person makes it possible to transform an image into information.

STAGE 4: ADAPTATION

In the present era, in addition to comparing face code and fingerprint data base, human step-by-step detection technology has been introduced with this system, which allows detection at 98 percent accuracy. In the database, photos with a comparable identifier are formed.

The database of the software system foreseen to be introduced is composed of:

- Documents confirming the city of migration and Naturalization of the Ministry of internal affairs and a certificate of treason submitted from the side of the road traffic fawfsiz;
- video surveillance camera images;
- photo-videos on social networks;
- video footage from bodycamera;
- photo video on mobile phones.

The complex system of face recognition and control based on biometric data covers 7 programs:

1. personality face recognition.
2. control of quarantine rules;
3. organizers of mass riots;
4. crime detection program;
5. identifying a fake face image;
6. profiling analysis;
7. formation of a psychological portrait of a person using social engineering.

After the Camera recognizes the face, it is the same fingerprint of the person who compares the files in the database so that they match the data in the database. The speed of recognition and comparison allows you to complete the process in less than a second, and the probability of error is minimal, that is, only 8 out of 1000 scanners can detect an error. For this reason, facial recognition technology has broad prospects of application in the Republic of Mikiyasi.

Today we are faced with facial recognition technology when we unlock our smartphones or tag our friends in Facebook photos. Developed countries have made tremendous progress using this technology in various fields. One of the industry leaders – China has set a huge goal to become the leader in the number of cameras with facial recognition function, in this regard, in a Chinese country where the total number of cameras is currently installed more than 170 million.

Since the main purpose of the camera is to ensure security, facial recognition is most often used to catch criminals. In modern cities, this technology is even used to identify and hold accountable citizens who crossed the road in the wrong place.

It is permissible to focus on one side, if in the task assigned to the system, the life and safety of a person are under threat, a completely incorrect definition, a decision cannot be made. With the help of automatic human recognition technology, the degree of frustration can be 90% reliable for very low targets, which does not pose a huge risk. But if a citizen is used by Huquq security agencies to search for suspects of particularly dangerous crimes in surveillance camera recordings, then an error of 10% will lead to a high level of destruction.

Thus, the software system applied to the city of Tashkent provides information with 98% accuracy by comparing data from the database on fingerprints and human behavior when identifying a citizen through the image of a human face. And it is believed that this system has high efficiency.

The future of facial recognition today, interest in this technology is very high, and this complicates many tasks related to the recognition of personality in photos and videos. However, many people are afraid of biometrics, which is considered a violation of their personal space and private information. It should be recognized that facial recognition technology brings great benefits to society and controls its security.Of course, the technology faces many problems, including ensuring the confidentiality and protection of personal data of citizens. Whether the use of such technology is an encroachment on privacy and a violation of human freedom or the use of this system in developed countries, disputes about this continue. Some experts say that the risk to human freedoms and the damage caused by this outweigh the benefits of dealing with dep system technologies.

However, most of the concerns are related to the lack of legislation regulating the software system and a qualitative approach to working with such technologies. The Republic of Uzbekistan has already adopted laws on the protection of personal data, and there is an opportunity to make additional proposals on legislative decrees and decisions by studying the features of joyiz. Another important factor in ensuring the safety of the implementation of these systems is the need to carefully approach the installation and use of cameras. To ensure that the information in the system will not be intercepted by intruders, the full transfer of this data must be carried out using encryption technologies during the process, and personal data must be anonymized. This means storing biometric and personal data only on secure servers and protecting information security, the interests of the individual, society and the state from internal and external threats from the State Unitary Enterprise "Cybersecurity" under the National Security Service.

Despite all the difficulties and issues related to technology, the introduction of artificial intelligence cameras with face recognition is a dolbzarb problem for digital Uzbekistan.

The use and application of facial recognition technologies in various fields in our Republic is possible.

★ Including:

★ in ensuring road safety;

★ ensuring security in crowded places;

★ security systems, prevention of illegal entry into the territory of the facility, search for suspects in a crime;

★ face control in places of catering and entertainment, search for suspicious and potentially dangerous visitors;

★ checking bank cards;

★ online payments and purchases;

★ criminalistics;

★ teleconference;

★ mobile applications;

there is an opportunity to apply ken insurance coverage in healthcare and a huge number of SOCS.

Although facial recognition technologies may seem like a simple thing, but human face recognition is already actively used in various fields.In a nutshell, developments in the field of human facial recognition have already borne fruit in various fields. This can be seen in the example of developed cities in this matter. Our country strives to ensure that in the future we have an intellectual metropolis – the fact that our Buda ring is located in a country that feels safe is our Yuki. Murderers, criminals and rapists cannot walk around among crowded places, state law enforcement officers automatically track their movements. Drunk drivers do not get behind the wheel, as the camera installed in the car does not allow the car to start the engine depending on the reaction to the face change. Missing people and missing people do not disappear without a trace without Darak's house, and the very concept of "accident" turns into an anachronism. Passports and various certificates and certificates will remain in the past - if we identify a person with the help of a person, a set of documents will not be needed. I am sure that intelligent technologies of facial recognition systems make everyday life easier and help prevent many tragedies.

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