UDC: 007.62

THE USE OF ARTIFICIAL INTELLIGENCE TECHNOLOGIES IN VARIOUS BRANCHES OF SCIENCE AND TECHNOLOGY

Iminov Ilkhomjon Khalimjon ogli.[1] *Master of Andijan Institute of Agriculture and Agro technologies, Andijan, Uzbekistan*

Melikuziyev Shukhratbek Mahammadin ogli.[2] *Master of Andijan Institute of Agriculture and Agro technologies, Andijan, Uzbekistan*

Urinov Iskandar Shuhratbek ogli.[3] *Master of Andijan Institute of Agriculture and Agro technologies, Andijan, Uzbekistan*

Abstract: In this article, we consider the use of artificial intelligence technologies in various branches of science and technology, its introduction into everyday life has greatly simplified security tasks. The speed of data processing, the extraction of important information, the identification of people and almost any objects, the detection of the behavior of objects allows you to quickly respond to possible violations and incidents, which reduces costs and ensures the effectiveness of security systems.

Keywords: AWAN camera, important information, Video analytics, algorithm, process.

In our time, video surveillance has become an integral part of an integrated security system, because current video surveillance systems can not only show and record video, but also program the reaction of the entire security system in case of emergency situations. Depending on the type of equipment, video surveillance systems are divided into analog and digital.

Artificial intelligence will be useful where it can solve a problem better and faster than a human. There are many such tasks in video surveillance. For example, when processing a parallel image transmitted from several cameras, the operator may miss an important point, and the total amount of information is immense for a person. Here a video analyst comes to the rescue, whose task is to compile metadata describing the object, identify significant events, detect deviations in the behavior of the observed object in the video stream for further responding to them in a predetermined way. And the integration of such systems into a network will make it possible to obtain information about the movement of an object even without its identification. Artificial intelligence for video analytics. Video analytics can be either software, where data is processed on a recorder or server, or hardware - the processing is performed by a processor built into the camera. Such cameras are called smart - that is, smart. There are several information processing methods: Image processing methods based on comparing pixels are used in motion detectors, abandoned object detectors, etc. Note that most of the algorithms are implemented at this level. Object recognition. The algorithm is based on determining the class of an object from its video image with subsequent comparison with a database of objects. This includes face recognition, license plate recognition, and so on. These are relatively simple analytics. Analysis of behavior and tracking of objects in the frame. The methods are based on complex mathematical algorithms, while in most cases it is difficult to compose an algorithm that would accurately describe the behavior of objects in the frame. It is even more difficult to implement the "transfer" of an object from one video camera to another. Consider a practical example - observing people in public places. Let's say a man who looks like a suspect walks into a shopping center. This person was traveling through the store with a large backpack that could contain dangerous goods. When the security service managed to identify him, he had already visited various rooms and disappeared into the parking lot. How can I find it on the video recordings of cameras installed on the floors and combine these videos? In this case, video analytics is used, which helps to identify a person and compare it with information available in databases or track the movement of a person even if he is not in the databases. Today there are technologies that allow performing all these operations in automatic or semi-automatic mode.

An AWAN camera is a section that connects the supply channel with the water intake front of the NS.

Most often it is an expanding and deepening AWAN camera with a length of at least (1.2-1.3) the length of the whirlpool zone. $L_{ав}=(1,2\text{-}1,3)\times L_{в}$

Arrange the rivers leading edge short with central taper angles up to 40-45 °, but not less than 30-35 °.

If mark. bottom of the water intake coor. is below the mark. bottom supply, channel, then the expanding front chamber is arranged with a straight bottom slope i = 0.2. The nature of the flow in such an AWAN camera is extremely unfavorable. If sediments are present in the water, they are deposited in the front chamber.

An effective means of improving flow spreading in a short expanding front chamber and reducing sediment deposition in it is the device of the front chamber bottom with a reverse slope of the bottom. With a gradual decrease in the depth of the fore-chamber, the flow in it expands better.

To reduce the length of the draw-off front in stations and of the block type, a curvilinear draw-off front is arranged.

By design, water intake facilities are divided into water intakes of the type of a coastal well, regulating the construction, suction pipes and the simplest tubeless bucket ones.

Water intakes of the shore well type are used at the HC for household and drinking purposes. To reduce local losses at the inlet of the flow into the suction pipe, the diameter of the inlet section is increased and Din = 1.3-1.5 Dvs.tr or at the recommended speed equal to 0.8-1 m / s. The inlet is buried under min. The water level at h2 = (1-1.5) Din, but not less than 0.5 m. The distance between the inlet of the vertical suction pipe and the bottom of the chamber is h1 = 0.8 Din.

Non-pressure water intakes of the type of a regulatory structure are arranged with several suction chambers. They are used at irrigation stations with the supply of each pump no more than 2 m3 / s and fluctuations in the water level in the water source no more than 2-3 m. The speed of approach to the suction. Pipes no more than 1 m / s, and the velocity of the flow entering the inlet section is about 0.8 m / s. Excess of the site coor. above the maximum water level, depending on the capital class, take 0.5-1 m. The width of the chamber bk = (2.5-3) Din. Deepening of the suction inlet. Pipeline for min. the water level is not less than 0.8 Din; the distance from the bottom of the well to the inlet of the suction t-yes is not less than 0.7-0.8 Din.

Suction pipes of chamber and elbow shape are built into the concrete block of the NS building with vertical pumps - axial and centrifugal. The chamber supply is arranged when the pump is supplied up to 2 m3 / s. The structural dimensions of the suction pipes are taken according to the catalogs or drawings of the manufacturer. Bottom lattice water intakes should be referred to the types of water intake structures specific to mountain rivers. The river bed is blocked off by a low concrete blind spillway dam, which forms a kind of spillway threshold.] Between the goby and the left-bank abutment, a horizontal gallery is cut into the dam, covered with a lattice. Water passing over this gallery enters ("falls through") through the grate and is discharged into the water intake chamber located in the left bank abutment. The design of the intake chamber provides for the possibility of flushing it from sediment trapped in it. The intake chamber usually has emergency entrance windows for water intake in case of clogging or freezing of the grating of the intake gallery. From the receiving chamber, water is supplied through water lines to the primary clarification tanks for clarification.

The design of such a water intake allows water intake at any change in flow rate and at any depth. It can be recommended for ingestion of water containing relatively coarse sediment.

This type of water intake is used in a wide range of flow rates (from 0.1 to 8 m3 / s).

In order to prevent clogging of the gratings with a stone, they are made of T-section steel (with the edge down). The width of the gaps should be less than the prevailing (60-90%) sizes of bottom sediments. In practice, the gaps are 6-12 mm wide. To be able to clean them and the gallery, the grates are arranged with lifting - in separate sections 1–2 m long.

List of references

1. RD 78.36.003-2002 Engineering and technical strength. Technical means of protection. Requirements and design standards for the protection of objects from criminal encroachments, 2009.
2. Kozlov S.B., Ivanov E.V. Entrepreneurship and Security. -M .: Universum, 2007.
3. “IP video surveillance system”, K. Goncharov, A. Cherkasov, T. Fisenko, 2010.
4. G. Krugl, “Professional video surveillance. Practice and technology of analog and digital CCTV ”, 2014.
5. “Video analytics. Myths and Reality ", Harald Lutz, Ivo Keller, Torsten Anstedt, 2013.
6. “Guide to Video Surveillance”, John Honovich, 2010.
7. “IP-video surveillance: visual aid”, Alexander Lytkin, 2009.
8. Video surveillance systems. Basics of construction, design and operation Peskin A.E., 2016.
9. Avdeev S. Digital resources in education [about the project "Informatization of education" and the creation of a single collection of digital educational resources] Education. - 2008.
10. Buhantseva NV. Electronic resources: technology development and cooperation, NV Buhantseva and M of Education and Science of Russia. Federation Gos.obrazovat. Institutions of higher. prof. Education, Volgogr. state. Univ.
11. Derevnina A. Principles of Electronic Textbooks / A. Derevnina, MB Koshelev Open Education. - 2001.
12. www.market.yandex.ru