

made as much as \$483 million from those deposits, therefore it was not profitable for the bank to learn about legality of this activity.

Everything worked well until 2008 when a large number of investors wanted to cash out their investments – to the tune of around \$7 billion. Madoff didn't have enough money to cover the request. This is how the largest pyramid of our time ended its existence. The size of his fraud was about \$65 billion. Thousands of investors lost their life savings and even a number of non-profitable organizations were defrauded by him also.

But situations like that are happening every day all over the world and our country is not the exception. For example, quite recently a very large financial pyramid was found in Grodno, the creator of which has not yet been caught. More than 40 people got into the network of this pyramid and the total amount of damage exceeded 900 thousand rubles.

Financial pyramids are dangerous because they can be easily disguised. That is why it is so important to know how to avoid getting into such a criminal system.

Pyramid schemes will never disappear, because people will never stop wanting to make easy money. Perhaps fewer people will fall into them, but this will only become an incentive for scammers to come up with more and more complex and intricate schemes or, on the contrary, simplify everything so that it will not be possible to suspect something. One day we'll find it out.

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#### NEURAL NETWORKS

Currently, artificial intelligence has firmly entered our lives and helps people in many spheres of activities. The most promising area of artificial intelligence which will hasten the advance of the future is neural networks.

Artificial neural networks are built on the principle of biological ones with several assumptions [1]. They operate a huge number of simple pro-

cesses with many connections. Like the human brain, these networks are capable of learning. For artificial neural networks, learning means the process of configuring the structure of connections between neurons and the weights of synaptic connections to effectively solve the task [1].

Already, neural networks are actively used in business, especially in marketing work, in the field of security, entertainment, medicine and other areas. They are able to do many things:

1) Image recognition

Take, for example, the most popular search engines such as Yandex and Google with image search. By uploading or clicking on an image, the user gives a command to the neural network, which it successfully copes and gives analogues, looking at thousands of images on the network [2].

2) Voice recognition and translation

The technology of translating foreign words is constantly being developed due to neural networks. Moreover, they have learnt to simulate human speech more realistically. By combining the two technologies, very soon you will not need to know the language to speak to a foreigner. Having such a translator at a hand, everything will be translated into your native language in the blink of an eye.

3) Art

Neural networks can turn a sketch into a detailed drawing by finishing all the elements, and can create at their own discretion, independently choosing the style of the final image [2]. Some neural networks invent and reproduce simple melodies, and there are those that write entire albums, inventing words to music.

Artificial intelligence is developing unimaginably fast. In medicine, almost every day there are new discoveries of the fields of application of neural networks, such as recognizing the disease by the appearance of the retina. Robot-midwives, with the possibility of information exchange with the purpose of teaching nursing. Automotive industry with self-learning machines, where the function of the driver is reduced to the function of the observer. Drones and robots able to learn to orientate in the field and move with a minimum of collisions on any surface [1]. Progress in science will help to save thousands of lives by helping both treat and replace people in high-risk areas.

In comparison with other machine learning methods, neural networks can: recognize deeper, catch unexpected patterns in the data; change structure based on incoming information; be used for almost everything because of their versatility. Nevertheless, there are some problems about working with neural networks. They remember answers instead of catching patterns in the data; cannot be consistently trained – on each training sample the

past experience will be forgotten; inability to get anything out of neural network apart from the result and understand how neural networks make decisions [2].

Initially, people created neural networks in order to recreate the mechanism of human brain functioning and surpass the capabilities of it. Anyway, that aim hasn't been achieved yet. Existing algorithms for neural networks are inferior to the capabilities of human brain.

People, who are involved in investigation and development of neural networks must have extensive knowledge and use non-standard methods, since neural networks still have many problems which don't allow to surpass possibilities of human brain. Neural network itself is not a "silver bullet" that can solve any problems and tasks without human participation. It is a comprehensive tool that, in the right hands, can do amazing things. And it still has everything ahead of it.

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#### WEIRD TOURIST ATTRACTIONS

Most tourist attractions are popular for obvious reasons. They are defined by superlatives — the biggest, oldest, most beautiful. But there are attractions that have become ones for less obvious reasons.

Some of these offbeat places are so odd or unusual that you can't help but want to see them. Strange and peculiar sights in the world are beyond counting! They are much better than the promoted locations speak about the character of the city and the mentality of its inhabitants. Let's go on a journey to find amazing places in different parts of our planet.

Nicolas Cage, the star of both renowned films and box-office flops, is known for his eccentric behavior. One of the examples of his quirks is his tomb in New Orleans. Back in 2010, Cage purchased two plots in the famed St. Louis Cemetery No. 1 in New Orleans. He used the space to