14.8%) (share in coal mining – 80.5%) and coke production by 13.4% (19.5%) [1].

According to the expectations of the Ministry of Economic Development and Ukrainian Trade in the first quarter of 2018, the energy complex will operate in conditions of gradual diversification of supply sources of raw materials energy [1].

The Government has taken the first steps towards a comprehensive solution to the problem issues of the coal industry functioning, the systematic measures implementation to use its potential for increasing the volume of coal production, growth the efficiency of coal mining enterprises, while solving the environmental and social problems of mining regions and creating favorable investment conditions. The concept of reforming and developing the coal industry for the period up to 2020 (the order of the Cabinet of Ministers) was approved for privatization of mines Ukraine dated May 24, 2017, No. 733) [2].

Consequently, take into account the current state of the coal industry, we can summarize that there are the following directions such as: state support for prospective mines, liquidation optimization of loss-making state coal mining enterprises, improving the state development programs, investing the new technologies, renewal of fixed assets, attracting foreign direct investment, increasing investment to the enterprises attractiveness of the economy state sector for coal production. The improving and developing each of them will help to increase the mining industry amelioration of our country.

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APPLICATION OF ARTIFICIAL INTELLIGENCE IN DIFFERENT SPHERES OF HUMAN ACTIVITY

Every day artificial intelligence (AI) become more and more real. Today there are many articles in scientific journals about its development and many films or books about evolved AI. Many people believe that this technology is specific, but that is incorrect. The term “artificial intelligence” implies a bunch of technologies for creating intellectual machines, which could make decisions and research the world in the common way, similar to the human brain but much faster, to some degree.

Nowadays there are some intellectual systems designed to the narrow area of application. For example, there are programs that make use of AI for creating voice recognition systems, game intellectual systems, text correction systems, etc. Here some fields of use AI: finance and economics, health care, industry, customer support services and searching services, entertainment, transportation, science, etc.

In finance and economics, AI allows the owner to buy shares when they are the most profitable and sell them when they begin to collapse, so it is well-defined. In addition, in economics, AI can predict exchange rates, share prices for next several days and analyze incomes and expenses for some period.

At health care AI can help doctors in their professional activity, it can include:

- x-ray or tomography image interpretations;
- analysis of general body's condition;
- assistance in serious diseases researching and cure creation;
- analysis of medical records;
- automated consultation and treatment planning;
- medical education.

In industry, robots under AI proved themselves effective at workplaces associated with routine tasks, which leads to errors or accidents due to some decrease in concentration over time. In addition, robots have been widely used in work that people can find humiliating.

Inside customer support services and searching services, AI analyzes the user requests and gives responses that are based on processed requests.

In entertainment, particularly in video games, artificial intelligence is used to create the illusion of gaming with other characters. It can be possible by creating non-player characters (NPCs) under AI control with behavior of the real player. AI game, besides regular artificial intelligence methods, also include algorithms of control theory and graph theory, interactive computer graphics and science. It allows immersing into the game and interacting with others like in the real world.

In transportation, AI can help drivers to monitor the vehicle technical condition (fuel level, various spare parts condition, exhaust control, etc.) or drive it only by itself, without a driver.

At last, in science, AI allows scientists to gather, manipulate and analyze data to get solutions and answers concerning basic questions of the universe. For example, in 2017 AI had found planet in the Kepler system by processing old data signals, which were neglected by scientists.

The most progressive form of AI is high-grade AI. By term high-grade AI we mean technology with intelligence that can learn itself, be useful in wide range of human activity. It means that high-grade AI includes all specialized AIs with all their tasks. At the beginning, it will be learning by giving the basic information, until it can independently process new portions of information. Traditional problems of high-grade AI researching include reasoning, knowledge, planning, learning, natural language processing, perception and the ability to move and manipulate objects. Scientists explore the brain structure to solve these problems, how it works and develops new algorithms for building intelligent systems network and methods for its training.

Some scientists, developers, writers and common people consider AI a danger to the humanity if it progresses harshly and then gets out of control. Others believe that AI, unlike previous technological revolutions, will create risk of mass unemployment because of introduction of machines under AI in all human activity areas. Many scientists are afraid that in future AI will become so powerful so it will try to get rid of the humankind for its higher efficiency in solution problems. However, AI can be very useful mechanisms for making humans' life more efficient, convenient and better.

In conclusion, when a real AI will be created, certainly there will be social and technical difficulties. Nevertheless, after all, artificial intelligence will involve technological and social revolution that will make a breakthrough in different spheres and give new answers to our questions.

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