THE USE OF ARTIFICIAL INTELLIGENCE IN MODERN CONDITIONS

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Since ancient times people tried to make their life easier with the help of different inventions. Ancient man used tools and traps for hunting, fire for cooking, a wheel for transportation, and so on. But people didn't want to stop inventing, they went further. For many centuries, they lived with the idea of automating various processes so that they would take place without their intervention. In our time, this idea is accomplished with the help of various installations which operate independently from the human and programs that control them. But in or-der to operate the installation a person must have a lot of knowledge in the required field. But thanks to artificial intelligence, this task (as well as many other tasks) becomes much easier.

We are sure that many people have heard about artificial intelligence. Many students are using AI for various purposes. For example, we can remember the chat GPT, which became widely known because of its easy-to-use. All you have to do is make a request and it will exe-cute the task using its knowledge base. It can answer questions, write a code, or even have a meaningful dialogue with you.

Artificial intelligence is a technology that mimics human behavior to perform tasks and learn progressively using the information which it collects. They are categorized into strong and weak. A strong AI is an intelligent algorithm that is designed to solve several problems at the human level and above. You can consult it as a real expert. This AI is able to respond to human emotions what is very surprising. It is very often used for solving such problems as writing texts, translating texts into different languages, drawing diagrams, and so on. Weak AI, unlike strong AI, is narrowly focused. An example is a camera with built-in AI used for face recognition.

One exciting and large-scale experiment was carried out in Tokyo. Artificial intelligence was used to automatically control a chemical plant for 35 days. It was realized that AI, based on self-learning, could be safely applied to plant control. It was demonstrated that this technology could manage operations that were beyond the capabilities of automated protocols and, until now, required manual control. Thanks to the experiment, the quality of products was improved, the cost of resources and the total time of all processes were reduced. Although the experiment was successful, it did not completely eliminate human intervention. During the experiment, when it was raining, the air temperature changed and the workers had to enter new configuration and out-put values.

Another good example of artificial intelligence usage is Canon, which invented an advanced Assisted Defect Recognition system that brought a new level of quality control to its production centers.

Canon combines human experience, analytical information and artificial intelligence (including machine learning, computer vision and predictive modelling) to improve the accuracy and efficiency of ma-chine part testing.

Canon products are carefully inspected using industrial radiography (X-rays) and internal structure images to check for faults each part and its internal structure.

Using computer vision and machine learning, the Assisted Defect Recognition technology system analyses images of inspected components, automatically identifies potential defects (even those that may go undetected by the human eye), and learns and improves the accuracy of the recognition technology using human correction data.

Artificial intelligence is one of the most significant and promising technologies of our time, which affects all spheres of human life. Thanks to its capabilities in analyzing enormous data, processing automation, forecasting and decision-making, AI is becoming an integral part of the modern world, providing revolutionary changes in business, medicine, education, transport and other industries. The application of artificial intelligence allows companies to optimize business processes, improve the quality of products and services, increase employee efficiency, reduce production costs, make correct decisions, and reach new levels of development.

However, to maximize the benefits of AI technologies, it is important to be mindful of the negative aspects of using AI.