

AUTOMATION AND ROBOTICS IN THE MODERN WORLD

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In the modern world, one of the market important characteristics is its competitiveness. This is facilitated by the need and huge demand in the current economy development. Therefore, many scientists and specialists are faced with an industrial task, which consists of the certain systems development to improve the production processes manufacturability and to develop automation and robotization.

The mass automation production is considered the beginning of the 50s of the twentieth century. New technologies creation led to a scientific and technological revolution. In addition making it easier for workers and other positive aspects in production, these changes have generated a number of adjustments. In connection with the active robots introduction in modern society, it is necessary to think about the developing costs and implementing technical support, about improving the workers skills, specialists and managers.

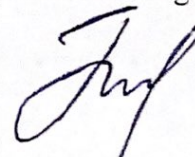
Despite this, robotics remains one of the most important scientific and technological progress areas. Robots have become indispensable in all spheres of human life: in industry, agriculture, medicine, science, animal husbandry, and industry. Many can no longer imagine the current world without robotic devices.

The robots production and use is inextricably linked to design, which allows natural sciences theoretical knowledge to be applied in practice. Designing and using robots and robotic systems is the main challenge for robotics. These universal devices carry out mechanical actions that resemble human ones. However, they are able to engage in heavier and more similar activities.

Robots consist of manipulation devices that are electrically, hydraulically or pneumatically driven. Also in their design there are vehicles, a drive and motion control module, sensor sensors, and a computing module.

It is worth listing the robots advantages: versatility, adaptation to new operations, work done on time. They do not need rest, food, but only energy. They are also the safety guarantee of the person himself, since people are freed from dangerous and hard work.

Robots are classified into programmable, adaptive, and intelligent. Programmable machines, or machines with programmed control, are robots with an algorithm and are included in the first generation group. The second generation



– with adaptive control, machines are able to contact with the outside world and perceive changes, work in unforeseen situations. The third generation – intelligent robots that have artificial intelligence, that is, a developed system of data perception, which allows them to reproduce human behavior in similar situations.

In conclusion, it is worth noting that the robotic future has already arrived. Countries are gaining momentum every day. This suggests that a person should be ready to introduce innovative technologies, become technically literate.

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