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### **Robotic technology**

Robots today have entered our lives in different areas. If you look at the history of space exploration, you can see that most of the space research is on the shoulders of robots. It is impossible to imagine modern factories without robotic technology. Robots perform many different operations.

The term "robot" came to us from the Czech word "robota", which literally means "forced labor". In principle, this word perfectly describes most robots.

First-generation robots are software-controlled robots designed to perform a specific, brutally programmed sequence of operations.

Robots of the second generation are "sensitive" robots designed to work with objects of any shape, perform Assembly operations, collect information about the environment using a large number of sensors.

Robots of the third generation are the so-called intelligent, robots designed to reproduce the physical and motor functions of a man, to solve intellectual problems.

The most popular ones in the middle ages were automatic clockworks and human figures that moved. So in 1495, Leonardo da Vinci created a mechanical knight project to show that the machine can move like a man. But Leonardo never designed it. This invention of the Renaissance is considered the first robot in history.

The first working humanoid robot was created by the French inventor Jacques de Vaucanson in 1737.

Modern robotics is based on computer technology. Industrial robots make up more than 80% of all existing devices today. They are able to replace a person in many factories almost completely: mechanical "workers" do not make mistakes, do not get tired.

Robots explore everything around them using sensors – special video cameras, distance sensors and other special devices. Everything that the robot "sees" and all the information that it receives goes to a small controller built inside the robot – a computer that processes the information received by the robot, makes decisions and gives commands to all nodes of the robot.

Robots are involved in operations to rescue people in disasters, neutralize explosive devices, look for places of leakage of dangerous gases to prevent an explosion.

The unique invention of the robot developed by Sony was a dog, Aibo. It is able to recognize its master, respond to commands, affection. Aibo has four stages of adulthood: infancy, childhood, adolescence and adulthood. The dog can run, jump, stretch, play football and dance.

By 2020-2030, micro robots measuring centimeters and millimeters will be actively used. They will be used in medicine, agriculture (as smart sensors) and many other fields. And in 10 years the first nanorobots (nanobots) will become widespread. Nanorobots will be able to carry out the construction of the necessary structures of molecules and atoms, which will do without special preparation of raw materials. This means that even individual nanorobots will be quite independent.

Nowadays, robotics is used in all fields and professions: in industry, medicine, war and even in space, robots help us at home, and perhaps in the future and will replace many human professions.

The world of robotics is huge, but it is no less interesting. Humanity still has a lot of discoveries in this area and perhaps once robots will become a full part of human society.