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ASSISTANTS OF THE XXIST CENTURY

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We live in the era of high technologies, and we use modern inventions in our everyday life. Today we can hardly imagine our life without such modern mobile devices as cell phones or laptops. Our offices are fully equipped with computers, printers, scanners, air-conditioners, interactive whiteboards and wi-fi modems. Household appliances (vacuum-cleaners, coffee-machines, dish-washers, food processors and others) help us save our time and energy. And could we imagine just 15 years ago all the things we can do on the wireless Internet nowadays: connecting with friends from all over the world, online shopping and banking, distance online learning, finding virtual relationships and even working from home? Isn't that awesome?! Our parents used to go to post-offices to send letters or pay bills, they went to libraries to find a good book and they used telephone-booths for phone-calls. Every day scientists are developing new and new things that make life easier for us. The latest technology is an integral part of every field of human activity today.

Today, robots are widespread. A robot is a machine – especially the one programmable by a computer – capable of carrying out a complex series of actions automatically. Robots can be guided by an external control device or the control may be embedded within. Robots may be constructed to take on human form but most robots are machines designed to perform a task with no regard to how they look. Modern robots, created on the basis of the latest achievements of science and technology, are used in all spheres of human activity. Depending on the functional purpose, the main types of robots are distinguished: **Domestic robots, Industrial robots, Military robots, Medical robots, Cosmo -robotss, Humanoid robots** and many others.

Domestic robot – this type of robots does chores around and inside homes. We are getting more and more used to such assistants at our homes, that is why we are not surprised watching a robot hovering the floor any more.

An **industrial** robot is a robot system used for manufacturing.

Typical applications of these robots include welding, painting, assembly, pick and place for printed circuit boards, packaging and labeling, palletizing, product inspection, and testing; all accomplished with high endurance, speed, and precision. They can assist in material handling.

Military robots are autonomous robots or remote-controlled mobile robots designed for military applications, from transportation to search and rescue and even attack. Some of such systems are currently in use, and many are under development.

Health care is one of the most progressive areas in which robots work.

Currently, robotic surgery is actively developing. Robotically-assisted surgery was developed to overcome the limitations of pre-existing minimally-invasive surgical procedures and to enhance the capabilities of surgeons performing open surgery.

The da Vinci Surgical System is a robotic surgical system made by The American Company Intuitive Surgical. It has been designed to facilitate complex surgery. Da Vinci Surgical Systems Survived 200,000 surgeries.

The da Vinci System has been designed to improve upon conventional laparoscopy, in which the surgeon operates while standing, using hand-held, long-shafted instruments, which have no wrists. Thanks to cybernetic technology, a person can recover a lost part of the body.

A major breakthrough has been achieved in medicine since bionic prostheses began to be used, which a person can manage with the help of his own nervous system. Using the prosthesis, a person can feel a touch, heat and pressure.

A **humanoid** robot is a robot that is based on the general structure of a human, such as a robot that walks on two legs and has an upper torso, or a robot that has two arms, two legs and a head. A humanoid robot does not necessarily look convincingly like a real person, for example the ASIMO humanoid robot has a helmet instead of a face.

They are also becoming increasingly popular as entertainers. For example, Ursula, a female robot, sings, plays music, dances and speaks to her audiences at Universal Studios. Several Disney theme park shows utilize animatronic robots that look, move and speak much like human beings.

Humanoid robots, especially those with artificial intelligence algorithms, could be useful for future dangerous and/or distant space exploration missions, without having the need to turn back around again and return to Earth once the mission is completed.

People received a faithful assistant who is able not only to perform work that is dangerous for a person's life, but also to free humanity from repetitive routine operations.

Therefore, new technologies are an integral part of every sphere of human activity today. We can say that they are deeply penetrated into our lives and modern society that can not exist in its present form without them.

References:

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