



Robotics And The Role Of Robots In Human Life

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ABSTRACT

This article claims that robotics has enormous potential to improve all aspects of human life. While these advantages are restricted to highly specialized environments such as factories, robotic technology has advanced to the point that it can now be used in the human environment on a daily basis. However, without a thorough understanding of how humans and robots communicate, this integration would fail.

KEYWORDS

Technology, robotics, humans, developing, robots, integration, medicine robots, cooking robots.

INTRODUCTION

What Exactly Is Robotics? Robotics is a field that combines science, engineering, and technology to create devices called robots that perform (or mimic) human behavior. Robots have long been a source of fascination in popular culture. R2-D2 is a sequel to R2-D1. Optimus Prime is a robot. WALL-E is a fictional

character created by Walt Disney. These exaggerated, humanoid robot concepts often seem to be caricatures of the real thing...or are they more foresighted than we realize? Robots are developing cognitive and mechanical capacities that do not rule out the possibility of an R2-D2-like computer in the future.

What is a robot?! A robot is a result of the robotics industry, which involves the development of programmable machines that can assist humans or imitate their behavior. Robots were initially designed to perform repetitive tasks (such as assembling cars on an assembly line), but they have since evolved to perform tasks such as fighting fires, cleaning houses, and assisting with extremely complex surgeries. Each robot has a different degree of autonomy, ranging from fully-autonomous bots that perform tasks without any external influences to human-controlled bots that carry out tasks that a human has complete control over.

The reach of what is called robotics expands as technology advances. In 2005, 90 percent of all robots were working in auto factories, assembling vehicles. These robots primarily consist of mechanical arms that are charged with welding or screwing on specific car parts. Today's concept of robotics has grown and extended to include the invention, creation, and use of bots that explore Earth's harshest environments, robots that assist law enforcement, and even robots that assist in almost every aspect of healthcare.

Although the field of robotics as a whole is growing, there are some characteristics that all robots share: All robots are made up of some kind of mechanical component. A robot's mechanical aspect aids it in completing tasks in the environment for which it was developed.

The wheels on the Mars 2020 Rover, for example, are individually motorized and made of titanium tubing, allowing it to securely grip the rugged terrain of Mars. Electrical components are needed by robots to control and power the machinery. In essence, the vast

majority of robots need an electric current (for example, from a battery). At the very least, robots have a basic understanding of computer programming. If a robot didn't have a set of instructions telling it what to do, it would be nothing more than a piece of simple machinery. Programming improves a robot's ability to understand when and how to execute a task.

They'll also continue to be a main focal point in smart factories, where they'll take on more difficult challenges and help to secure global supply chains. Though relatively young, the robotics industry is filled with an admirable promise of progress that science fiction could once only dream about.

Self-driving robots are not the same as car-driving robots. In fact, this means that the cars are designed to look like robots and that artificial intelligence is installed in them. The autonomous self-driving vehicle is accessible in today's world, including several countries in Europe and America. Trains, including buses and trams, are fully automated.

A protection, safety, and surveillance robot's job is routine. It performs a survey of the desired area. If there is some kind of noise, it instantly alerts the owner. In the military, this kind of robot is used. This type of robot can also be used in everyday life by humans. This type of robot is used in the military to perform a variety of tasks. They're used to reload and detonate explosives. They are sent to the target location to observe enemy activity, which is an extremely dangerous task for soldiers.

Cooking by Robots - it's difficult to motivate yourself to prepare a proper, delectable meal

for yourself when you get home after a long day at work. Many people prefer to prepare their meals in a rush rather than the traditional way, which isn't always nutritious or tasty. But what if you had a robotic cooking assistant who prepared your food exactly the way you wanted it?

The effect of robotics in the field of medicine is undeniable. Engineers have recently discovered surgical robots. As a result of this accomplishment, a large amount of money has been invested in medical robotics. Google and Johnson & Johnson recently announced a collaboration to create a next-generation medical robot. In the recent past, robots were only used in the clinical system just as assistants. But now, they are introduced as part and parcel of the clinical system. Though it is not possible yet, it is not too far that robots will replace surgeons in surgical operations.

Robotics is now referred to as a General-Purpose Technology. That is, its impact on economic and social institutions have the potential to change societies. As a result, it is now normal to address robotics in the classroom.

Every day, many students suffer from a variety of illnesses. As a result, they are unable to physically attend the courses. As a result, they skip classes. Engineers have created robots that can assist students in attending classes from afar. In the classroom, the robot acts as a human who is operated by the person himself.

When autistic students interact with others, they also find it frustrating and perplexing. Humanoid robots have a human-like appearance. As they resemble humans, it is easy to communicate with them. These robots

can teach social cues and educational lessons to autistic students. In this sector, the success rate is very high.

Science has made it possible to learn from a remote location. It has already been made possible by technology, and it will only improve in the future. Teachers can now teach a class even if they are not physically present in the room. In that case, a telepresence robot is used to complete the task. That robot acts like a human and is controlled by the person himself from a distance place. So, students find it interesting and interactive to interact with the person through the robots.

So far, robots in the conclusion don't look or behave like the sentient beings depicted in science fiction. Rather, these simple machines are responsible for performing simple tasks that increase productivity in the office or factory. We're also decades away from a future in which robots perform more complex and meaningful tasks.

But other factors continue to have a significant impact on computing and, consequently, robotics. Computing power per watt of electric power, for instance, is growing dramatically. In everyday terms, that means your smartphone can do more with the same battery life. It also means quicker advances in artificial intelligence — things like computer vision and natural language processing that help robots “see” and learn. The writing of more efficient software code is another way to enhance robotic performance. In a couple of decades, perhaps, robots might do most of our coding.

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