

The influence of robots on the human society

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Abstract

This article basically provide knowledge about how robots influence on the human society. Human and technology go hand in hand. It is allowed humans to exercise more control over their living environment, it also functioned as a catalyst in the development of humanity. A result of artificial intelligence development, Robotics is a confluence science using the continuing advancements of mechanical engineering, material science, sensor fabrication, manufacturing techniques, and advanced algorithms. The study and practice of robotics will expose a dabbler or professional to hundreds of different avenues of study. The use of robotics will also increase unemployment levels among humans. Technology could however, also be used to help falling populations create a sustainable society. Robotics could fill in the gaps in the education, production sector, medical sector and workforce regulate where necessary.

Keywords: artificial intelligence, sustainable society, workforce regulate

Introduction

Robotics can be described as the current pinnacle of technical development. When it comes to current situation, robots are just one of the latest stages of technological progress. The number of robots being used by businesses to boost productivity has increased rapidly in recent years. And there is no reason to believe that this pace of robotization will begin to slow any time soon. With this increasing tendency, factories will realign its aspects with more interconnected and automated systems, which will apparently uplift global economy to 4th industrial revolution.

Although automated robotic systems improve the productivity by creating such an important economic opportunities, it's not possible to argue that robotics will always facilitate human-race to gain economic benefits without bringing any negative impact, in terms of social and environmental consideration.

Main sectors robots are present in

Military

Military robots are commonly armed with air-to-ground missiles and are remotely operated from a command from a command center while being used in reconnaissance missions.

Education

Most commonly, these types of robots consist of a simplified small-scale version of an industrial robot. The purpose of education robots is to help teach students how they work or how to develop software for this type of robots. As seen in the Medical sector section, educational robots can also be used to train students so that they know what to do in certain circumstances.

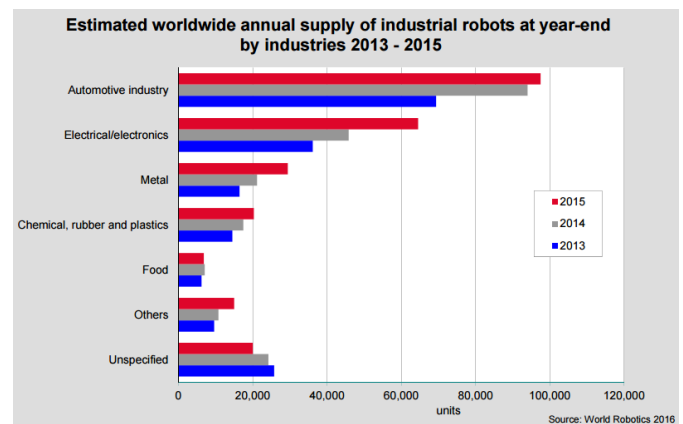
As a conclusion, education robots have the purpose to teach people and help them gain more knowledge that they could further on use to either help others or create new things.

Production Sector

This is the largest sector when it comes to present of robots. From consumer goods to heavy industries production sector has been gained a lot influence from robots. Over the years attraction of robots has caused companies economic growth. The capability of industrial robots to perform repeated, hard and boring tasks for longer periods and to work dirty and demeaning conditions had a great influence on aforesaid economies of scale.

Medical Sector

Robots are able to perform major operations while only making small incisions. Thus patients can benefit immensely if the operation succeeds. The benefits are fewer traumas, fewer infections, decreased healing time and a faster release from hospital.



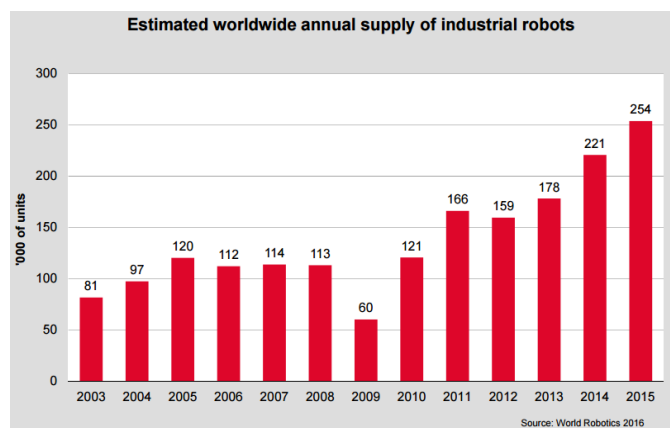
Present and Future of Robots Market

By the year of 2010 total worlds' robots popular has reached the limit of 8.6 million. Out of that, roughly half of all the

robots in the world are in Asia, 32% in Europe, and 16% in North America, 1% in Australasia and 1% in Africa. 40% of all the robots in the world are in Japan, making Japan the country with the highest number of robots.

Growth of Industrial Robots

The number of industrial robots deployed worldwide will increase to around 2.6 million units by 2019. That's about one million units more than in the record-breaking year of 2015. Broken down according to sectors, around 70 percent of industrial robots are currently at work in the automotive, electrical/electronic and metal and machinery industry segments. In 2015, the strongest growth in the number of operational units recorded here was registered in the electronics industry, which boasted a rise of 18 percent. The metal industry posted an increase of 16 percent, with the automotive sector growing by 10 percent.



Positive Impact of Robotics

With the increasing number of robots around the world has caused to main positive impacts. Most importantly better avoidance of hazardous and accidents by more precise and much focused direction in dangerous and repeated task has been eased and over-all result on working environment has improved.

They can handle lifting heavy loads, toxic substances, and repetitive tasks. This has helped companies to prevent many accidents, also saving time and money

Also the automation of industry due to the addition of robots resulted in the development of new jobs such as design and maintenance of new machines. Workers can be replaced by robots and retained to maintain and supervise the machines. This results in a better working life and different benefits for workers.

In the long run, automation of production systems has created more jobs for creative thinking and decision making.

Introduction of robotics as work force generally raises productivity, job opportunities and most importantly income along socioeconomic strata. Theses raised incomes in particular are very important in shaping the society. As a direct result salaries have been increased and the workweek has been reduced.

In the medical field robots are used for intricate surgeries such as prostate cancer surgery. Robots are able to reach and fit where human hands cannot, allowing greater accuracy. Some robotic benefits in the medical field are less invasive procedures and less pain for the patient when recovering.

With the advancement of medical robots along with brain research and bio printing health sector is showing a great potential for an overall improvement within is decade.

The benefits of robots have opened the door for their use in many fields creating number of social and economic benefits for mankind.

Negative Impact of Robotics

It is remarkable that there are many negative influences on human society brought by robots as well as positive impacts. Firstly, the wide use of robots probably increases the unemployment rate. With the enrollment of robots and improvement of working efficiency, factories need not so many labors that many people are fired.

As a result, critics of the automation boom claim that such technological advancements are killing more off middle class jobs. Robots and automated systems have not only eliminated elevator operators and highway toll collectors, but also making inroads into higher skilled job functions and the long term effect in job losses among human workers may be much more severe than most expect.

Secondly, robots work by following some designated instructors. In some urgent and dangerous situations, robots cannot adjust automatically to fit the change and lead to serious consequence. Thirdly, the widespread use of robots decrease the independence of human on machines, weaken the creativity ability of human indirectly. There are many other examples of intelligent technology gone bad, but more often than not they involve deception rather than physical danger. Malevolent bots, designed by criminals, are now ubiquitous on social media sites and elsewhere online. The mobile dating app Tinder, for example, has been frequently infiltrated by bots posing as real people that attempt to manipulate users into using their webcams or disclosing credit card information. So it's not a stretch to imagine that untrustworthy bots may soon come to the physical world.

In sum, I concede that robots have the negative effects on society and sometimes are even dangerous. However, compared with the benefits they bring, those disadvantages are less. On balance, robots will act as an important role and contribute to human society soon

Conclusion and recommendations

Experts predict robots will take over 30% of our jobs within the next 10 years. Also there is a doubt that within few decades robots will take over humankind by being more intellectual creatures than humans to control the earth and its systems. With these increasing negative impacts due to robotics, governments, corporate firms and other institutions will have to come up with more suitable solutions to minimize its effects.

People who worry about job losses to automation will have to improve their skills in different ways. Also improving education systems and helping people to shape their creativity is more important. Rather than involving in stereotyped jobs workers will have to diversify their skills to minimize this tendency.

However, on a five to 10 year horizon, it is likely that changes in job types will also be accompanied by significant net job losses in some major occupations. As a result many developed countries are getting ready to reforms its job

markets meet these demands by creating more applicable structure. For a successful reform government should start collaborating with the service sector more, so that industry specific and futuristic courses are introduced for employees. While robots are better suited for some tasks than people are and are therefore ultimately likely to take over most of these tasks, yet some industry leaders suspect that robots are not likely to cause large scale job losses as many advocates argue. For example, in March of 2012, the retail giant Amazon set up over 1,300 robots in a few of its distribution centers. As of February 2014, Amazon had not reduced the number of human employees as a result of the robot addition.

References

1. Ayres R, Miller S. Hand book of industrial robot, historical perspective and role in automation, Carnegie-Mellon University, Pittsburg, Pennsylvania, 1981.
2. Bumiller E. Navy Drone Violated Washington Airspace, New York Times, 2010.
3. Heerink M, Krose B, Evers V, Wielinga B. The Influence of Social Presence on Acceptance of a Companion Robot by Older People, Journal of Physical Agents, 2008.
4. Hockstein NG, Gourin CG, Faust RA, Terris DJ. A history of robots: from science fiction to surgical robots, Springer, London, 2007.
5. Jones DG, Crane VS, Trussell RG. Automated medication dispensing: The ATC 212 system, Hosp. Pharm, 1989.
6. Singer PW. Wired for War: The Robotics Revolution and Conflict in the 21st Century, Penguin Press, New York, NY, 2009.
7. <https://en.wikibooks.org/wiki/Robotics/Introduction>
8. <http://blogs.worldbank.org/jobs/economic-and-social-consequences-robotization>
9. The influence of robots on the human society RUC 2011 International Federation of Robotics
10. <https://www.reference.com/technology/robots-impact-society-2edd1fe19adaf219>
11. <http://www.lse.ac.uk/researchAndExpertise/researchHighlights/societyMediaAndScience/Will-robots-replace-humans.aspx>
12. <http://www.bbc.com/future/story/20150812-how-to-tell-a-good-robot-from-the-bad>
13. www.forbes.com
14. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4266810>