AN OVERVIEW REPORT ON NEW ERA OF ROBOTICS STATISTICS & SYSTEMS

Er. Chittaranjan Routray, Er. Umesh Kumar Sahoo

*Department of Mechnaical Engineering, Swami Vivekananda School of Engineering & Technology, Chaitanya Prasad, Madanpur, Bhubaneswar, Khordha, Odisha-752054
** Department of Mechnaical Engineering, Swami Vivekananda School of Engineering & Technology, Chaitanya Prasad, Madanpur, Bhubaneswar, Khordha, Odisha-752054

ABSTRACT:

This article contains detailed statistics about the robot method and system. As we all know that artificial intelligence is increasing in the market and the market is becoming totally dependent on artificial intelligence to perform multi-faceted tasks. Robotics is a very famous division in the field of manufacturing and sciences, where every engineer pays great attention to create a robot that can perform a certain task and can give suitable results for the given task. Every engineer tries to mark a robot with 0% error, which is quite impossible as technology increases. We can think about it, but still 0% is fine because it will not have any point of error, but it means that it will give you the correct answer for each question without any doubt. Showing its uses, its detailed data, how it works and how you feel it works, everything is meant in this document, which will be enough to get good information about robotics and devices along with the robot system. Anxiety is growing that robots and artificial intelligence will replace many professions. To remain relevant in this changing occupational landscape, the employee of the future is expected to be advanced, able to detect opportunities that transform companies and provide original solutions to face global tests. To develop such competencies, work-integrated learning (WIL) has emerged as an important approach. The resolution of this study is to examine the key factors that drive invention among WIL scholars. Unlike previous education that has been primarily qualitative or based on a single snapshot, this measurable longitudinal study analyzes students' competencies before and after their contribution to a WIL task in a company. It then involves an analysis of confirmatory issues to associate pre- and post-placement competencies.

Keywords: Innovation, Industry 4.0, Robots, Artificial intelligence, Employability, Work integrated learning.

INTRODUCTION

The robot is a human thing that is capable of doing all the work that the human can do in much less time than a human can replace a human, but it can help humans perform much of their tasks in daily life. Robots are also applications of artificial intelligence and sensors that combine to form a human machine called robots. There are numerous applications of robots in the world of science and computer applications. Scientists and engineers are working on robots to make them almost applicable in all fields. It can be semi-automatic or fully automatic, that is, there are many robots that are like humans, that is, they can talk, they can walk without the guidance of a human by inputting a programmable language at the time of manufacturing, but there are also semi-automatic ones. - automated, which is the needle remote control for the only most suitable and interesting

branches in the field of science and education, which is loved by all the youth and everyone wants to learn robotics for future use. There are several uses in the future where people will depend on fully automated complex and dramatic stars, as bright as for everyday work, and the labor force in the world will decrease because one robot is capable of doing the work of 10 people. There is global gratitude for the need for inventions to transform economies (Atwood et al. 2016; Castaño, Méndez, & Galindo, 2016; Jenson, Leith, Doyle, West, & Miles, 2016a; Jenson, Leith, Doyle, West, & Miles , 2016b; Xie and Wang, 2020).

With the advent of industry 4.0 or the fourth manufacturing rebellion characterized by cyber-physical schemes, there is a focus on the advanced application of progressive robotics and artificial intelligence to achieve controllability of its operation. Robotics is a digital revolution in productions (Haenein & Kaplan, 2019; Kaplan & Haeniein, 2019; Srivarajah et al., 2017). However, reaping the benefits of Industry 4.0 is not only a technical challenge but also a humanoid issue, requiring courtesy in skill augmentation and also in the hominid dimensions of core disruption (Berger, von Briel, Davidsson, and Kuckertz, 2019). Consequently, human factors are dangerous elements of the manufacturing 4.0 skills needed for the future, not only to ensure that workers can effectively and positively use new technologies, but also to continue and thrive in a changing office. quickly (AGE, 2015; Sousa & Rocha, 2019). Although robotics such as cooperative robots (cobots) can support workers and restore their safety and efficiency, if skill change is not achieved effectively, many fear that automatons will take away their professions. Regarding the professional sphere, the revolution has attracted increased attention in the scientific literature (Atwood et al. 2016; Taks, Tynjala, Toding, Kukemelk, and Venesaar, 2014).

Education has instigated describing systematic approaches that increase creativity in academics (Brent & Felder, 2014; Daly, Mosyjowski, & Seifert, 2014); supporting makerspaces to substitute new ideas (Halverson and Sheridan, 2014); incorporate the teaching of technological innovation and the creation of new companies (Jackson, Gordon and Christholm, 1996; Standish-Koun and Rice, 2002; Taks et al., 2014); and focus on innovative design (Daly, Yilmaz, Christian, Seifert and González, 2012). Entrepreneurship education should not be aimed at generating entrepreneurs who start their own industries but also entrepreneurs, that is, those who have an entrepreneurial attitude and can subsidize innovation within companies (Taks et al., 2014). Accordingly, the research question of this education is "What are the important factors influencing the development of revolution in students across WIL?" It will measure the revolution and its possible drivers before and after the WIL agreement. The education findings are significant in (1) providing professional literacy feedback to students about the expansion of innovation; (2) an attractive expansion of the WIL program by detecting areas of skill insufficiency which can then be ruled out to inform corrective action in successful WIL groundwork programs and offer additional provision to students; and (3) notify industry appointment jobs to WIL hosts through evidence-based communication on the competencies and well-being of WIL students.

There is much rhetoric and anecdotes about the services needed for the works of the future, but there is little experiential evidence to authenticate what the key factors or causes of innovation are. The Young Australians Foundation created a report titled "The New Basics: Big Data Reveals the Skills Young People Need for the New Work Order" where they recommended services young Australians are essential for the jobs of the future, including problem solving. , serious thinking, communication and coordination (FYA, 2016). However, so far these abilities need to be tested empirically to determine their effect on origin. Therefore, the influence of these skills on modernization will be observed in this education and will be discussed further in this segment.

TYPE OF ROBOT

There are 5 types of robots discovered so far and they are in progress. Robots can be as small as 2 mm and as large as 200 m depending on the need, they are manufactured and classified into different types. As technology advances, it will definitely reach a place where machines will replace hominids. So five types are:

Pre-programmed robots

Pre-programmed robots or robots designed for a single task. It is a program generated robot that repairs for a single task as other cars are not programmed into it. For example, we can say that a mechanical arm has a single task, which is to solder a door or insert a part into a motor, but it can perform a single task related to only one card. The operation of this mechanical arm is much faster, longer and more efficient than human work.

humanoid robots

Humanoid robots are robots similar to humans in their behavior and voice. These robots can perform jobs like a human: run, jump, carry objects, and many others. These have an appearance similar to that of a human face, that is, the face with expression. The most famous example of this humanoid robot is the Hanson Sophia robot and the Boston Dynamics Atlas, both of which are structured human-like robots that can easily perform human work.

Autonomous Robots

Autonomous robots are those that can function without human guidance. These robots are designed to perform the task in an open environment, so they do not require any human guidance to perform their task. For example, the Roomba vacuum cleaner that moves freely and does what is necessary.

Teleoperated robots

Teleoperated robots are mechanical robots controlled solely by humans. These robots work in extreme geographical conditions, such as weather and other circumstances. The example of this teleoperated robot is a submarine that is used to repair leaks during oil spills or drones that are used to detect land mines on the battlefield.

Augmentation robots

Augmentation robots are robots that have the ability to do jobs that current humans can do or we can also do the work that humans have stopped doing. The great example of augmentation robots is the exoskeleton that is used to propel heavy loads. Augmenting automata enhance current humanoid competencies or replace competencies that a human might have lost. Some examples of add-on robots are robotic prosthetics or exoskeletons that are discarded to lift significant weights.

USES OF ROBOTS

There are numerous uses of robotics in today's world in almost all fields. The demand for robotics is growing day by day in all fields, so below are some uses of robotics in major fields.

Manufacturing

Manufacturing is the main unit where robotics scratches its hands. These robots are used in engineering units because they can work more efficiently than a human worker. There are several industries, such as the automotive industry, where robots have been successfully replacing humans working in that industry.

Home

Robots are also seen in homes where they help in doing housework and entertaining children and other small household chores. The best examples for this Roomba vacuum cleaner that cleans the house and moves around the house helping others.

Travel

Due to development, there are many autonomous cars on the market that were desired many years ago. It is promising because data science and robotics combine and form autonomous cars for tesla, ford,

Waymo, Volkswagen and BMW. They are all working to make more similar cars for future use so that it is not useful for any human being to drive them safely.

Health care

Robots have also worked great in the healthcare field as there are many departments governed by robots. From physiotherapy to surgeries, robots are capable of doing both, so engineers are working on it to make healthcare more convenient by treating all diseases in a simple way. The best example of this type of robots is Toyota's healthcare assistants, which help people get back on their feet after any accident or anything else.

Advantages of Robots

Cost effectiveness

They are very cost effective as they do not take breaks as the human body needs a break while working. So this makes it cost effective and can do the same job repeatedly once a cycle is established. There is no risk of RSI. It also depresses the manufacturing cost with the increase in production quantity. The cost of an investment in purchasing the robot will easily pay for itself in a very short period of time.

Improved quality assurance

There are very few people who like to do their tasks for a certain amount of time and with full concentration but then they lose interest or concentration and start doing it just for money but this is not for robots. There is a low risk of getting bored or not concentrating because it is made to do the job and provide higher level products that are hard for the human race to find when people compare their jobs to their money, not their interests or field.

Increased productivity

Robots increase the productivity rate of an industry as humans can do a job 24/7, they have a given duration of time but robots can work without taking breaks or leaving. A single robot can do the work of 10 people and can be easily used in a manufacturing unit for different productivities. You need to focus on staff work, but your headache is also not work when a robot is working in your manufacturing industry.

Work in hazardous environments

Not everyone can work in one place with the environment, but robots can perform efforts anywhere without worrying about the environment. Its production rate is extremely high. Can work. I know extremely high temperatures to low temperatures where it is difficult for people to work. It works for the job and there is no risk with the robot as with humans. It is also a great advantage of robots.

Disadvantages of Robots

The biggest disadvantage of robots is that people with good potential are losing their jobs because robots can do the work of 10 people in one use, so basically everyone wants to save them money and buys the robot instead of paying a 10 potential people for your work. Show that this was a huge disadvantage for humanity where unemployment is higher than unemployment and now due to the invention of robots more people are becoming jobless day by day.

Initial investment costs

The initial investment is very high when you are going to buy a robot for your work. Although the cost of the investment is reversed in a few months, you still need to pay a lot before purchasing it.

Hiring qualified personnel

When you have a robot that is not fully automatic, then you need to hire trained staff to operate the robots, it becomes very difficult to get paid a high salary and arranging the salary in your job becomes quite difficult, so it is better to have it. a fully automatic robot or paying humans for labor. All the advantages and disadvantages of olives are the basic and most important ones, but there are many other disadvantages and advantages of them.

CONCLUSION

This was enough detail about robotic devices and systems. As the world is becoming technology-oriented robots, others are most in demand. All the engineers in many companies work day and night to make robots as quickly as possible. High demand and high costs give rise to an economy very quickly. Therefore, we should keep looking for robots and other devices that can help us make the world full of technology where manpower is less. We have seen that robots can do all the jobs of humans and are replacing human power in all fields and in all aspects, so we must train ourselves to that level so that no one can replace them with robots. A robot is something created by man and cannot replace humans in any aspect. Just keep increasing your skills so that something man-made cannot replace you with your job. Robot manufacturing can't be around, so what everyone can do is increase ability power and be faster, which can help you stay in your position without being replaced by a robot or any other device. There are many resources on robots and robotics that everyone needs to read and gain knowledge about it so that you don't have to bother in your future to make any decision of your life or your future generation as the future generation will be a generation that is Fully Automatic and technology will peak. A key outcome of this education has been an authenticated tool that quantitatively measures the development of innovation and its drivers. The results of this tool can contribute to the growth of the WIL package to improve student training and support skill expansion. It will also be valuable as a response to students regarding their occupational literacy, self-knowledge and authorization for their growth.

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