

Impact of automation and artificial intelligence

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Abstract - The reported study highlights the importance of automation and artificial intelligence in the current world of technologies. These domains have marked significant progress with their rapidly growing applications across the globe, Hence the present study is highlighting the roles of the automation and artificial intelligence.

Key Words: Artificial intelligence, Technologies, Automation

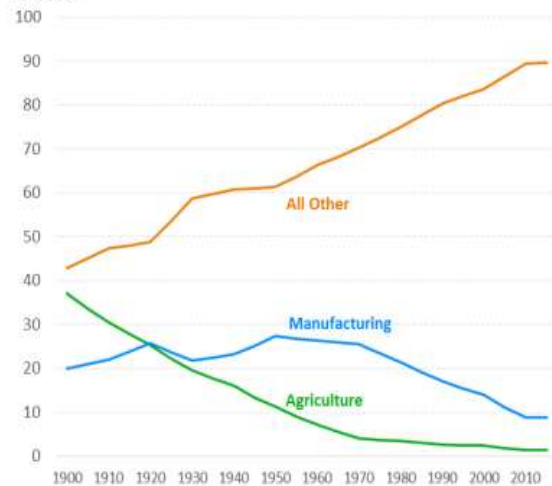
IMPACTS OF THE AUTOMATION

Impacts of automation are highly effective in employment because automation has possible to modify the future jobs and framework of the labor force. Looking further, advances of the technology in the computing power, robotics, and artificial intelligence have been created the possibility for the automation to pierce deeply into the occupations far away from manufacturing (Dirican, 2015). The hope which future automation might be changes the jobs and the labor force on the systematic scale uplift some of the essential questions for the employee's compensation-

- What type of jobs are more allowing automation and what type of jobs are less susceptible?
- How is the composition of employment over the economic sector probable to change?
- What happens to the employee displaced from the occupation affected by automation?

Right now automation is not an innovative occurrence and has been contributed to specific shifts in the employment throughout 20th century. With the widespread assumption of the gas-powered tractor in starting of the 20th century. Farmers also experienced more benefits involving the more efficient utilization of the labor an enhanced production. Automation also contributes to the decline in agricultural employment from close to 40% of the overall employment in 1900 to less than 2 percent since 2000.

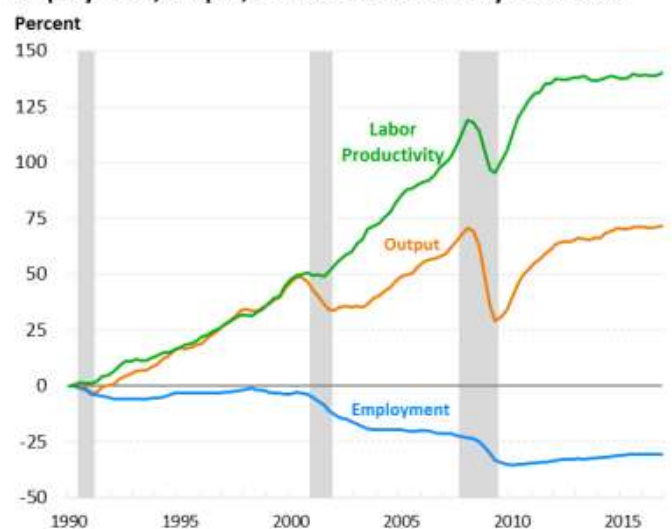
Figure 1–Distribution of the Labor Force by Sector Percent



Sources: "Productivity Trends in the United States" by John W. Kendrick for the National Bureau of Economic Research, 1961; US Bureau of Economic Analysis, NCCI

Also, the share of manufacturing into employment has been declined from the highest of across 25% in the year 1950s to less than 10 percent presently (Intelligence, 2016). This decline is much due to automation. A study of Ball state found that 87 percent of job losses in the manufacturing from 2000 to 2010 was due to the automation when 13 percent were due to the globalization and trade II.

Figure 2–US Manufacturing: Cumulative Changes in Employment, Output, and Labor Productivity Since 1990



Shaded areas indicate US recessions
Source: US Bureau of Labor Statistics (BLS)

Automation will be enhancing the impact on the world of the work duration of the few next years. This is felt by some industries already, and various countries are also experiencing the impacts more others than..

Different type of automation

The term automation utilized while describing a procedure performed by the machine or software, generally undertaken by humans. This can be mechanical or virtual, easy, or complicated.

Industrial automation

There are many utilizations for the robots and other automated machines in the settings of the industrial. Taking an example 3D printing is autonomous vehicles for logistics. However, significant machines are utilized in dangerous environments involving "cobots" that work alongside humans, helping with the heavy lifting things and other possible hazardous tasks. Automation of the software also plays an improving typical role in working humans' lives and there are differences which worth considering.



BPA (business process automation)

This includes a company taking its all fundamental non-manufacturing procedures and looking for ways to enhance efficiency through automatizing them. Different tools of software are utilized over areas like HR, contract management, and accounts, mandatory creating a back-office task without any people (Intelligence, 2016).

RPA (Robotics process automation)

Not related to the robotics, RPA is a term provided to the highest level automation, where the software is utilized to fix circumstances to increase the procedures perform and perform typical tasks. Sooner than being a feature of the BPA solution, it satisfies a primary function in one typical area like client order procedure. This is a one-off investment, sooner than business services.

IPA (Intelligent process automation)

Causes of RPA is the follower to pre-define rules, IPA software utilizes AI (artificial intelligence) to learn how to copy of human-computer interactions and provide intelligent outcomes. IPS another element is machine

learning, this is a type of AI that authorizes computers to modify, test, and change various approaches that are based on the data extraction (Dirican, 2015).



The impact of the automation is in the employment sector is most of the jobs are destroyed and most of them created by the year 2020-2021. Automation will bring the change, but the exact impact of the automation on employment is maybe destroyed or created.

Impact of automation on human

Automation affected individuals and societies. Many of the tasks which are performed and time consuming now perform by machines like dishwashing being the most obvious examples. Another example is the transformation of the communications industry and how automation has been enhanced the lives of individuals globally. At present, millions of telephone calls which one time have been passed by the human operators are controlled by the automatic machines.

Another automation application in the communication system involves LAN (local area network) and communication satellite. A LAN is operating such as an automated telephone organization, but it can also transfer the digital data as well as a voice between terminals in the system. Satellites are necessary to transfer the telephone or video calls all over the world, and all this depends on the automated guidance system to retain and place satellites in the predetermined orbit.

In the banking sector, the automatic cashier is ever-present. The medical industry utilizes robots to aid the doctors in examining and patient treatment. Navigation, automatic reservation, and instrument landing system, automatic pilots have been revolutionized to the travel industry (Wang & Siau, 2019).

But, automation has been also outcome in the extreme dislocations in the employment patterns. While a machine can do work of the 10 employees, all the employees are relocated to learn new skills. This is a completely negative impact has been strongly discussed. According to the consumer and population demand for products of the automation improves, advance jobs have been created.

There is a positive impact on the employment patterns involve the computerized programs which assist designers in the various field develop and also test new ideas fast, without any building a physical prototype. Automation also makes this much simpler for the people to bring out the

work, also they do in the non- traditional places. They can stay home like do their jobs by communicating with other persons and machines through means of the highly automated communication system.

ADVANTAGES AND DISADVANTAGES

Automation has advantages like include the highest production rates and enhanced productivity, efficiently used materials, good product quality, increased safety, smaller work weeks for labor, and eliminate the factory lead time. The highest result and improved productivity have been the biggest reason for justifying the utilization of automation.

On the other hand, the main disadvantages generally associated with automation, is employee displacement has been debated above. Despite the social advantages which might outcome from the retraining displaced employees for other jobs, and the worker whose jobs taken under by the machine undergoes the stress (Wang & Siau, 2019).

IMPACTS OF ARTIFICIAL INTELLIGENCE

AI has more essential technology for each field. Each business requires to apply it on their website designs, application development, and marketing procedures (Partel, et al., 2019). So it is essential to work with the AI developer. Game application developers' comforts are very huge in artificial intelligence. Many of them are developers. Because artificial intelligence develops interesting games. When video games are played by players, they will get a response from the system and this will be customized through the player input without any human intervention.

AI provides many benefits are given below-

Search by the voice is on the rise

Alexa has started the voice command and more people secured with the convenience of the problem the voice commands rather of keeping to type them. It keeps artificial intelligence for any system to be capable to process the voice commands. At present more persons have begun carrying out online searches with the voice commands. It is found that more than half of the online searches will be based on the voice end of the year 2020. And this convenient (Alexis, 2017). Therefore, it is essential to hire the AI developers to boost their websites for the voice-based search.

Availability 24/7

Mobile applications and websites are available 24/7 but the support staff for any inconvenience is not available 24/7. The customer care team will be available at any time must alternating shifts, and customers are too impatient and they require an immediate response. They don't want to wait for 24 hours. So the AI gives solutions to issues, AI chatbots. More of the websites are managed by the chatbots which will always respond quickly to the queries of the customers anytime. Chatbots are saved money, so AI saves time and costs.

Increased user experience

While this implemented appropriately, users enjoy great service on their website and will sure that they come back

again. One method to get is to forecast what they are searching for. When they type the name of any product on the website, should present them with many options for one product match with the name. to remove the number of typing visitors on the website assists to increase their experience exceedingly(Alexis, 2017). Another method to get this is to present with their last product order.

Removed errors

Robots are work on codes and they have lack emotions. Therefore, they cannot be preoccupied with anything. Their work is accurate with the 99.9% accuracy which humans can not match. Regardless this is data analysis or easy computations, robots will bring out with reliable accuracy. That is why some of the organizations employ them as a data analyst. So this is important that business decisions are mainly based on the data analysis figures and this can be fatal if the figures are not right. For mandating the accuracy, employ AI for the business data analysis and reports.

Increased speed

Machines, computers, and robots are working with amazing speed. So this is the reason to utilize artificial intelligence (AI) technology. To add on the Microsoft excel for immediately. To perform sum up of the thousands of figures, they only require to highlight the figures, and after that click on the auto sum button and get the answers. Like that robots are work with speed robots. Therefore, if they think about the astonishing speed apply artificial intelligence.

Hazardous tasks

Some of the tasks are dangerous for humans which can not be acrid out by humans. But, these tasks require to be brought out because of the essence of their outcomes. These tasks are carried out by robots. For seeking an example some of the explanations are hazardous because of gases which may be provided off by act. This is better to design robots to carry out these tasks. Nowadays, robots are planned to explore the space, take snapshots of the space, and send them to earth. These robots can fly a space shuttle on their own. These robots are designed specifically for these jobs. These are based on artificial intelligence.

The procreation of the medical application

The AI has been surrendered the numerous emergence of the medical apps. These medical applications help with mild diagnoses and prescriptions. They only require to input symptoms of diseases and their medical history on the app. The disease will be explored and medicine will be prescribed. These applications depend on big volumes of the medical data to be capable to diagnose and provide the medicines accurately. And additionally, artificial intelligence assists with voice commands, reduced error, improved user experience, increased speed, medical diagnose, dangerous tasks and medical prescription, and other areas.

AI impacts them positively as well as negatively in the world.

There are many positive impacts of the AI are-

Provide new jobs

Bridging the language divides

Government transformation

Health care delivery

Creating art (Wang & Siau, 2019).

Negative impacts of artificial intelligence

Unbiased systems and integrity

Access to data, knowledge, and technology

Privacy

Technological unemployment

Control over data and disproportional data

Security

AI carries out impressive apps, with the remarkable advantages for all humans, society, science, however, there are many notable unanswered questions with the political, social or ethical facets. So people should aware of this.

Risks are existential from the artificial normally intelligence. Existential risks from the artificial normally intelligence is a hypothesis which substantial progress in the artificial general intelligence (AGI) maybe someday outcome in human elimination or some of the other type unrecoverable global disaster(Wang & Siau, 2019).

REFERENCES

1. Alexis, P. (2017). R-Tourism: Introducing the Potential Impact of Robotics and Service Automation in Tourism. *Ovidius University Annals, Series Economic Sciences*, 17(1).
2. Dirican, C. (2015). The impacts of robotics, artificial intelligence on business, and economics. *Procedia-Social and Behavioral Sciences*, 195, 564-573.
3. Intelligence, A. (2016). Automation, and the Economy. *Executive office of the President*, 18-19.
4. Partel, V., Nunes, L., Stansly, P., & Ampatzidis, Y. (2019). Automated vision-based system for monitoring Asian citrus psyllid in orchards utilizing artificial intelligence. *Computers and Electronics in Agriculture*, 162, 328-336.
5. SM.Mohammed. 2016. Continuous Integration and Automation. *International Journal of Creative Research Thoughts (IJCRT)*, ISSN:2320-2882, Volume.4, Issue 3, pp.938-945, July 2016.
6. SM.Mohammed. 2017.DevOps Automation and Agile Methodology. *International Journal of Creative Research Thoughts (IJCRT)*, ISSN:2320-2882, Volume.5, Issue 3, pp.946-949,
7. SM.Mohammed. 2018.Streamlining DevOps Automation For Cloud Applications. *International Journal of Creative Research Thoughts (IJCRT)*, ISSN:2320-2882, Volume.6, Issue 4, pp.955-959, October-2018
8. Wang, W., & Siau, K. (2019). Artificial intelligence, machine learning, automation, robotics, future of work, and future of humanity: a review and research agenda. *Journal of Database Management (JDM)*, 30(1), 61-79.