

Artificial Intelligence – A Tryst With Destiny of Human Labour

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*“The development of full artificial intelligence could spell the end of human race”
~ Hawking (2014)*

Abstract: *When ‘Alexa’ knows more and works better than humans we are elated and gobsmacked with such innovation. Science experts ask humans to be wary of AI as they will get rid of the human race for being slow and tardy. AI is the “theory and development of computer systems able to perform tasks normally requiring human intelligence, such as visual perceptions, speech, recognition, decision-making and translation between languages”(LexicoOxford Dictionary, 2019). In other words, it is an intelligent machine which works and reacts like humans. Frey and Osborne(2017) & Bowles(2014) claimed that 47% of US and 54% of EU jobs are at risk of being automated in the years to come. This could raise issues like job loss and connected issues like working conditions in the organization where robots work, redundancy, how humans and robots would interact, problems of discrimination and harassment, liability for acts and so on. The future is nigh where AI would overtake the intellectual capacity of a human and we ought to take stock of our laws and be prepared so as to make the AI beneficial for the society. This paper will study the problems arising out of AI being introduced into a working environment and the need for having laws in place for countering the ill-effects AI has on the human work force. The study would also look into the factors of having a favorable environment for humans and AI and how it can be achieved without hampering the interest of humans by having checks and balances in place through law.*

Keywords: *Artificial intelligence, machine learning, employment, safeguards, human labour*

I. INTRODUCTION

As early as in the 19th century marked the advancement of technology with the evolution of computers. The computer when initially invented was for performing numerical calculations mechanically but in the years that followed there has been tremendous advancement in technology with the passage of several generations of computers which has made life of an individual as effortless as can be. The most latest of these inventions is the genesis of artificial intelligence. Artificial Intelligence (AI) is defined as “the ability of a digital computer or computer controlled robot to perform tasks commonly associated with intelligent beings” (Copeland, 2019).

The term Artificial Intelligence was coined by John McCarthy when he organized a workshop on reasoning program (Russell and Norvig, 1995). A common understanding of artificial intelligence

means the machines ability to imitate intelligent human behaviour but this concept keeps shifting based on the goals they are trying to achieve with the AI system. Amazon who is pioneering into the AI business defines it as “the field of computer science dedicated to solving cognitive problems commonly associated with human intelligence, such as learning, problem solving and pattern recognition”. Amazon is determined to have an upper hand has embarked into machine learning with such rigor which is clear from the statement made by Amazon “Without machine learning, Amazon.com couldn’t grow its business, improve its customer experience and selection, and optimize its logistic speed and quality”(Marr, 2018).

Basically AI is developed for three basic objectives:

- a) Build systems that can think like humans
- b) Get systems to work without figuring how human reasoning works
- c) Using human reasoning as a model but it is not the end(Marr, 2018).

This being the objective, the current focus is on the third object of developing models similar to having reasoning as a human. All techno giants are so engrossed in coming out with the latest innovations in machine and deep learning to provide them with cutting edge technology which can provide them an impetus against their rivals. And as it seems it will not be far when these giants will be more focused on coming up with systems that think like humans thereby paving way for either the a total destruction or construction of the human race. But it remains to be seen, as with the invention of computers and to its latest advancement it will be in the near future that we ought to look in for the wellbeing of human being which in the long run could pose a problem to humanity.

While, Google is focused on creating smart useful technology that is helpful to the people like translation and healthcare; Facebook is keen on helping people with communications. IBM on the other hand has three focus areas like AI engineering, AI Tech and AI Science. With the growing development some of the tech giants came together in 2016 to create a partnership on AI to benefit people and society(Marr, 2018).

Hintze (2016) categories AI into four types namely:

Type 1 Reactive Machines – Examples Deep Blue IBM Chess program and Google’s AlphaGO

Type 2 Limited Memory - Use past experience to make future decisions. Eg: Self-driving cars

Type 3 Theory of Mind – Understanding others beliefs, desires and intentions that impact decisions. This AI does not exist as of now

Type 4 Self-awareness – AI has sense of self consciousness. Machines that understand current state and can infer what others feel. This also does not exist as of now.

AI has ventured into all walks of life since its advent like in automation, machine learning, machine vision, natural language processing, robotics, self-driving cars, in health care, business, education, finance, law and manufacturing. With its rampant role in every sphere of life, there rises a problem of security and also the need for having a regulation over such innovations so as to not hamper the human life in future.

II. ESTIMATES ON THE IMPACT OF AI ON EMPLOYMENT

AI is one of the best inventions made by mankind and we are proud and flabbergasted by it when robots or machines are capable of doing tasks like domestic chores, jobs which require less skill or even memorizing facts, which seems tedious for the humans. Along with this envy we dream of a scenario wherein AI would share a portion of our tasks too. But is it something which we really aspire for as the several studies show the heartening facts of employability. A study by Frey and Osborne in the year 2014 estimates that in a decade or two about 47% of the total US employment is in a high risk category meaning there is a possibility of automation in these occupations. Another study compile by McKinsey Global Institute predicts that by 2030 as many as 800 million jobs could be lost world over due to automation. The impact AI will have will differ from country to country, where middle and low paying jobs will be hit hard while the high paying creative and cognitive jobs would be more preferred(Vincent, 2017). About 3 to 14 percent of the workforce will have to switch their occupations so as to stay ahead and adapt to the changing scenario. This being the said, it does not mean that all jobs are at stake it is the worst case scenario, if we are not well prepared for the effects of AI and governments ought to be prepared and take necessary steps to counter the issues that would creep in. A brighter side to this deteriorating situation is that AI will also create about 2.3 million jobs in the future(Gartner, 2017). In the UK in the next 20 years it is estimated that around 7 million jobs will be lost however AI is set to create as many as 7.2 million jobs, resulting in a modest net boost of around 200,000 jobs (Frangoul, 2018).

There is also concern for the fact that AI or the robots would not know how a simple act or a word spoken out of place can affect humans which is likely to create an even more depressing scenario than what is already present. AI as it stands today may not be able to feel, sense or act on an impulse based on the reactions or situation at hand which in the future is more prone to worsen during its interaction with humans.

This calls for humans to be smarter so as to be unique in a way that each individual has some form of contribution which cannot be automated. As it needs to be noted that the mundane and monotonous jobs are the ones which will be hit the most like a cashier at a store, driver, packaging and similar ones. A word of caution was raised by the late scientist *Stephen Hawkins* in an interview to BBC that “the full development of AI could spell the end of the human race”. For the tech giants these innovations seem to be a renaissance or a golden age of AI or machine learning. It needs to be seen how we can tackle this displacement effect without hampering the lives of the human race and by placing prominence on human than on machines for which effective measures ought to be taken.

III. ILL-EFFECTS OF AI AT WORKPLACE

With the advancement in technology the business has started resorting to AI for cutting down on the workforce who are prone to emotions, sickness and also be paid for the work they do along with benefits which will not be a problem at all if AI or machines are acquired. So business

giants have started relying more on robots than on humans as the productivity of a human is less compared to that of a machines. Some of the industries which are at high risk of automation are transportation, manufacturing, construction, administration and support service, wholesale and retail industry and many more. But the question remains are we prepared for the effects AI has on human race.

A few of the problems faced are as follows:

Lack of Control: Automation of things might result in the AI having control of the activities and the events which it is considers significant. When jobs are done by humans their will have both sensitivity and sentiments attachment and work accordingly but AI taking over means a lack of attachment and be more mechanical than personal and thereby place control over all aspects without giving rein to over any task that it is performing.

Disruption of Plans: By automation you expect to reach a desired result which might not be possible with humans involved. But their plans may go haywire if the machines are not adapt to perform on the basis of a case by case situation then it would only result in disaster.

Disrupted relations: There is a possibility that the relation between a human and machine will not go expected. Since the people are more sensitive and humane the machines will not be able to understand their emotions and might create a scenario not conducive to the working of humans. Humans doing routine work will feel like a failure and good for nothing in front of these machines which will inversely affect not only the workforce but can escalate and hamper the functioning of their families too.

Lose of cognitive learning: Machines doing jobs will any way require at least a bit of emotions as in the long run it is the humans who ought to be benefitted from such innovations. But by placing AIs in all the major industries the message set out is that the requirement for the time being is one who does not have cognitive thinking but acts like robots.

Humans working along with AI: Humans will have in the near future as their partner a machine as companion and this is sure to cause a lot of stress and hatred among the workforce. Humans being compared to machines on matters of productivity and intelligence will take a stalk on the employees.

Pressure on average wage: Middle wage jobs are going to be affected due to automation which will affect the education sector also. Some of the risk includes wage polarization, income inequality and lack of income advancement. Being pitched against a machine, humans will never be in a position to outsmart them in mechanical tasks.

Till date it is believed that the highly sensitive and professional jobs will remain with the humans and it cannot be replaced. But time will say whether this is true, cause scientist are continuously researching on aspects which would be even better than what is available now. *Will there be a time when AIs will outgrow humans?* The answer remains, *time will tell.*

IV. BASIC SAFEGUARDS PROVIDED TO EMPLOYEES

Labour laws deals with various aspects of the employees and a plethora of legislations relating to the interest of the employees and protection of their interest is covered. Some of the laws favouring the employees are related to wages, employment, social security and industrial relations. Employees are always at the mercy of the employers with regard to job security, benefits, promotion and other related factors. Employers normally has to face the brunt due to the number of legal or risks at work place which can also result in wrongful termination without following the procedures established. Employers ought to be aware that labour laws are what is more significant than the provisions in the labour contract - any termination policy or clause outlined within a contract should be checked against the law.

Some of the basic safeguards are as follows:

- i. Minimum / Adequate wage
- ii. Workplace safety
- iii. Health coverage
- iv. Protection from discrimination
- v. Leaves

Some of the provisions in India favouring employees under the Factories Act 1948, are adults that is those who have completed 18 years of age are not to work in one week for more than 48 hours and in addition to this in a day the maximum working hours to not to exceed 9 hours. According to Section 51 of the Act, “the spread over should not exceed 10-1/2 hours”. The Minimum Wages Act, 1948 also specifies about the working hours under the rules 20 to 25, “that the number of work hours in a day should not exceed 9 hours for an adult”. “Section 66 of the Factories Act, 1948 imposes restriction on employment of women to work between 7.00 pm to 6.00 am”.

Factories Act, 1948 specifies that “weekly holiday on the first day of the week, which is Sunday or may be any other day, as may be approved in writing by the Chief Inspector of Factories, for a particular area is necessary”. As per the provisions of the Factories Act, 1948 the interval for rest of half an hour should be provided so that the working hours in a stretch does not exceed five and half hours. According to Minimum Wages Act, “the working day of an adult worker shall be so arranged that inclusive of the interval of rest it shall not exceed 12 hours on any day”.

The Factories Act, 1948 is intended for promoting the health, safety, welfare, working hours and leaves of workers. Also the Industrial Employment Standing Orders Act, 1946 is regarding codified conditions of service for employees and Industrial Dispute Act, 1947 for regulating the rights of the employees and for settling of disputes. Legislations relating to remuneration like Payment of Bonus Act, 1965; Minimum Wages Act, 1948; Payment of Wages Act, 1936; Equal Remuneration Act, 1976. All these are for ensuring that the employees are provided adequate remuneration for the work that they perform. These are the safeguards available for human labour in India. And for promoting social security there are laws pertaining to Gratuity, Workmen’s Compensation, Employee Provident Fund and Employee State Insurance.

These are in place for providing protection to the work force from being exploited. These laws are basically for the upliftment of workmen and to ensure the protection of their rights. With the advancement of technology, there is going to be a total upscale on the kind of skills that will be provided by the AI which will in turn affect the workmen or employees in the future. This calls for a need for regulating the AI or the workforce will in future be out of jobs and the future bleak for human beings as a whole.

V. Need for regulating AI

In the ever changing world of technology there is a need for law to adept itself or else laws will be lagging behind which will be a detriment to human kind. Canada, China, Japan, the UK, the US, and the EU have launched ambitious strategies to promote the development and commercialization of AI with a view to maintain sustained economic competitiveness after the inevitable global transition to an AI-driven economy.

The future is with technology and just so we are not capable of appreciating the advancement it does not mean that law has to step back. Now is the time for laws to be more efficacious and fruitful as humans are in a need for the laws for protecting their livelihood. The time is nigh to take a stand or it would result in deaths of human beings for want of a law for protecting their life and liberty.

With the advancement of technology, there is a possibility that employees will lose their jobs and being underpaid as AIs are more efficient and can do work in shorter span of time and also without paying monthly for it. Further, there will also not be the need for providing benefits for AI robots like the employers do for the workforce. Also it is very unlikely that the AI will be held responsible for their actions. The question would arise as to whether, AI can be held responsible for the acts that they do. The legal system in its interaction with software like robotics finds fault only if the developer was negligent or could foresee harm. For example, in *Jones v. W + M Automation, Inc*(2007), “a case from New York State in 2007, did not find the defendant liable where a robotic gantry loading system injured a worker, because the court found that the manufacturer had complied with regulations”. Meaning, we have to be prepared for future legal battles for acts of AIs.

The AI community has long been calling for policy action with respect to AI and criticism is getting louder on the growing legal vacuum in virtually every domain affected by technological advancement. Policymakers around the world have understood the significance of the issue and are willing to address AI policy challenges. There is a need for have a regulation in place for protecting the workforce and to uphold such AIs which is for the benefit of human and not as a detriment. There is a need to keep a watch for the advancement in AI technology but along with advancement we should never forget that every individual has the right to life and personal liberty. The life envisaged in the UDHR(1948) and the Constitution of India (1950) is a life of dignity with proper livelihood, food shelter and clothing. So advancement should be for the upgrading of human life in society as a whole and not for downgrading them.

VI Conclusion - Synergy between humans and AI

There needs to be a middle way available for humans to be able to work alongside with AI. This is only possible if there is a restraint placed on the AIs in the workplace. Government has to come up with regulations for the displacement of workforce from employment. One such measure could be *placing a cap on the percentage of displacement* from employment. The employment of AI should never be at the cost of losing the human workforce.

Humans have to face the reality and reconcile with the fact that they have to up their skills and knowledge and beat AI which is an invention by man so it is only another man who can beat the AI. All we humans have to do is *teach creativity among the workforce* and also for the coming generations to flourish. Make creativity the key mantra for humans to succeed in this ever evolving technological world. The time is nigh for humans to search for their vocation or skills and to excel to be an ever contesting individual against machines.

For the smooth functioning of AI and humans there is a need for *developing an Artificial Intelligence Organisation* which can come together and *prepare policies for the benefit of all concerned*. To put forward the issues relating to labour force, some NGOs can also *work towards uplifting the human rights of employees* which in the long run is sure to crop up and it is essential to be prepared to face the consequences. It is high time to bell the cat and be prepared for the future rather than to wait for some eventuality to happen to act. The question is; are we willing to equip us with regulations for the coming future?

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