

# Positive and Negative Impact of Artificial Intelligence and Machine Learning on Society

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**Abstract**—In the near future, machines will slowly enhance and replace human capabilities in many fields. Artificial Intelligence along with machine learning are becoming dominant problem solving techniques. Artificial intelligence is an area of computer science that emphasizes the creation of intelligent machines that work and react like humans. In this research paper, I will represent the positive and negative impacts of machine learning and artificial intelligence on today's society. With the help of various impacts discussed in the research paper, I will find the conclusion. Depending upon the point of view, artificial intelligence and machine learning can either affect positively or negatively to the society.

**Keywords**—artificial intelligence, automation, algorithms, machine learning, self-driving cars.

## I. INTRODUCTION

People tend to make things more brilliant and more intelligent: the phone turned into a cell phone, the wristwatch turned into a smartwatch [7].

Another model is the place people empowered a PC to ingest information, process it, give a result, at that point gain from extra new information and give an improved result. In layman terms, this is cognition and technologies that enable cognition are cognitive technologies such as Machine Learning, Natural Language Processing, Natural Language Generation, etc [7].

In one model, Facebook had to close down an AI motor after engineers found that the AI had made its own remarkable language that people couldn't decipher. Analysts at Facebook found that the visit bots had digressed from the content and were imparting in another dialect created without human info or intercession.

AI is any gadget that can see its own condition and takes activities that augment its risk of accomplishment. Computer based intelligence incorporates frameworks that peruse and decipher composed language and natural language processing applications like Amazon Alexa.

Machine learning is a kind of AI, where pc's can learn without being expressly customized. AI programs instruct themselves to develop and change when presented to new information. This is the genuine meaning of hands on preparing.

Person to person communication locales are extraordinary instruments for associating with individuals. Nonetheless, as person to person communication has gotten across the board, individuals are finding unlawful and untrustworthy approaches to utilize these networks. We see that people, especially teens and young adults, are finding new ways to bully one another over the Internet. Close to 25% of parents in a study conducted by Symantec reported that, to their knowledge, their child has been involved in a cyberbullying incident.

## II. LITERATURE REVIEW

Artificial Intelligence is basically a superset of machine learning. Artificial intelligence is a branch of computer science that aims to create intelligent machines. It has become an important part of the technology industry. Robotics is one of the major field of the artificial intelligence. Robots needs some kind of intelligence to handle tasks such as manipulation and navigation. In the

today's world, artificial intelligence is used mostly in all the sectors. With the help of artificial intelligence, we can do smart weather forecasting which helps us to analyze complex weather data. Artificial intelligence also increased the automation like today artificial intelligence can perform almost all kinds of work that human can do. In advertising sector also, advertisers will be able to predict what kinds of ads emotionally impact you. Productivity increased a lot after implementing AI solutions in their business as stated by 54% of executives.

Machine learning is one of the most exciting technologies that we would have ever come across. We most likely utilize a great deal of learning calculation many time without knowing it[12]. There are various applications of machine learning but same case as artificial intelligence it is not necessary that there will be only positive impact of machine learning on the society. It can happen that there can also be various negative impacts of machine learning on the society. With the help of machine learning, healthcare and transport sector is widely spread. In health sector it is used to spot the abnormalities which can be done through various algorithms. In transport sector, car can learn by itself how to drive and how to perform various actions according to the situations.

**TABLE 1**  
**MACHINE LEARNING IMPACT FROM SOCIAL PERSPECTIVE**

	Social Perspective		
	Domain	Merits	Demerits
Healthcare / Medical	1. Digital Health Records 2. Advanced Analytics Visualization	1. Personalized medical experience. 2. Lower cost of care.	1. Leak of sensitive information. 2. Lack of human touch.
People Mobility	1. Precise information on infrastructure development. 2. Mobility predictions.	1. Traffic prediction - effective routing enabling time saving. 2. Promote better driving behavior.	1. Personal Data Privacy 2. Personal Data Security.
Political Campaign	1. Digital election campaigns 2. Predictions on sponsors	1. Create awareness and engaging public voters to understand the importance of political issues. 2. Micro-targeting campaigns to educate voters.	1. Strategizing voters emotions and behaviors. 2. Jeopardies ethical, fairness and privacy.
Banking & Marketing	1. Banking customer acquisition.	1. New customer acquisition and retentions.	1. Privacy of personal data. 2. Leak of sensitive information

### III. IMPACT OF ARTIFICIAL INTELLIGENCE ON SOCIETY

#### 3.1 POSITIVE IMPACT OF ARTIFICIAL INTELLIGENCE ON SOCIETY

Similarly as with most changes throughout everyday life, there will be certain and negative effects on society as man-made brainpower keeps on changing the world we live in. How that will adjust is impossible to say and up for much discussion and for some individuals to mull over. With AI spending expected to reach \$46 billion by 2020, as indicated by an IDC report, there's no indication of the innovation easing back down. Adding AI to your business might be the following stage as you search for approaches to propel your tasks and increment your exhibition [4].

In spite of the fact that the ramifications of fusing AI into our lives may sound overwhelming enough to dispose of its applications inside and out, here is the reason AI is a help to mankind and not a revile that may hurt it later on [4]. Society will gain unlimited hours of productivity with just the concept of autonomous transportation and artificial intelligence influencing our traffic congestion issues not to mention the other ways it will improve on the job productivity. Saving time from stressful commutes, humans will be able to spend their time in a variety of other ways.

### 3.1.1 INCREASED AUTOMATION

Today, AI can perform intensive human labor and backbreaking tasks easily without the need for human intervention. This has hugely mechanized a few applications and assignments in ventures just as in various segments [13].

Simulated intelligence advances are in effect progressively received and consolidated in ventures and associations to lessen the outstanding burden of people.

An excellent case of the marvels of AI in upgrading the degree of robotization can be found in the Japanese machine toolbuilder, Okuma. They as of late offered a huge number of developments to exhibit the fate of shrewd assembling.

### 3.1.2 SMART WEATHER FORECASTING

In the recent few years, we have perceived the importance of Artificial Intelligence and its technologies in weather and climate forecasting. The field of "Atmosphere Informatics" is continually blooming as it rouses a productive joint effort between information researchers and atmosphere researchers.

This joint effort has thought of instruments to watch and examine progressively complex atmosphere information. This has helped fundamentally in crossing over any barrier among comprehension and information [13].

There are endless uses of AI focused on precise climate anticipating. IBM, for example, utilized its PCs to improve their figures in 1996.

### 3.1.3 CHANGING GOVERNMENT

Less desk work, speedier reactions, a progressively proficient organization - AI has the ability to definitely change open organization, however are governments prepared? This tech accompanies the two dangers and openings that should be comprehended and assessed. Scholarly Kevin D'souza accepts gamification and pretending could be the way to community workers breaking down complex cases, concocting better arrangements, and genuinely understanding the eventual fate of self-ruling frameworks.

### 3.1.4 ADVERTISING

At last, artificial intelligence is going to take focused on/customized promoting to an entire other level. On the off chance that you think the Facebook Cambridge Analytica outrage was awful, at that point you have no clue what's in store in the following decade.

Publicists are as of now ready to anticipate what kinds of promotions sincerely sway your buying conduct. Over the long haul, advertisements are going to keep on getting progressively customized to the person.

Ads are going to continue to become smarter and more embedded in our daily lives thanks to AI. Machine learning algorithms are building personality profiles on every human being. The amount of data collected by advertisers continues to grow. Related item proposals, indexed lists and social news source things are for the most part instances of spots where publicists are implanting shrewd promotions that utilization AI to target you as an individual shopper.

## 3.2 NEGATIVE IMPACT OF ARTIFICIAL INTELLIGENCE ON SOCIETY

Artificial intelligence calculations can be found in forms in everything from youngster welfare to recidivism rates. In the event that off base information is incorporated or if the calculation incorporates a hidden predisposition, the outcomes could be deplorable.

For the working environment, these negative effects can be seen in enlisting choices which see managers abstaining from employing qualified ladies and minorities. This saw Amazon approach the previous fall and offer its own difficulties with these procedures, which saw some defame the organization for its outcomes. Notwithstanding, I accept that sharing this useful example was bold, especially on the off chance that it enables different firms to understand the difficulties that may exist [11].

### **3.2.1 MAKES UNINTENDED AND UNFORSEEN CONSEQUENCES**

While fears about executioner robots snatch features, unintended and unexpected outcomes of man-made reasoning need consideration today, as we're as of now living with them. For instance, it is accepted that Facebook's newsfeed calculation impacted a political decision result that influenced geopolitics [15].

### **3.2.2 AI BIAS**

Since AI calculations are worked by people, they can have worked in predisposition by the individuals who either purposefully or accidentally bring them into the calculation. In the event that AI calculations are worked with a predisposition or the information in the preparation sets they are given to gain from is one-sided, they will deliver results that are one-sided. This reality could prompt unintended results like the ones we have seen with prejudicial enlisting calculations and Microsoft's Twitter visit bot that got supremacist. As organizations manufacture AI calculations, they should be created and prepared capably.

### **3.2.3 LOSS OF CERTAIN JOBS**

While numerous occupations will be made by artificial intelligence and numerous individuals foresee a net increment in employments or possibly envision a similar sum will be made to supplant the ones that are lost gratitude to AI innovation, there will be employments individuals do today that machines will dominate. This will expect changes to preparing and training projects to set up our future workforce just as helping current specialists progress to new places that will use their extraordinary human capacities.

### **3.2.4 SECURITY**

Security is a critical aspect, if somebody compromises a smart system, for instance a self-driving car, the consequences can be disastrous, particularly given the ever increasing cyber security threat.

## **IV. IMPACT OF MACHINE LEARNING ON SOCIETY**

### **4.1 POSITIVE IMPACT OF MACHINE LEARNING ON SOCIETY**

Neural systems (mirroring the procedure of genuine neurons in the cerebrum) are making ready toward leaps forward in AI, called "deep learning." Machine learning can assist us with living more joyful, more advantageous, and increasingly profitable lives... in the event that we realize how to bridle its capacity [8].

The potential for machine learning is colossal, and nobody realizes that more than Danny Lange, VP of Machine Learning at the US-based games motor Unity.

Having recently worked for Uber and Amazon, Lang accepts that future employments of machine learning will extend over all segments, disturbing the vast majority of what we know.

Awareness is vital to know that machine learning is now growing not only in the education field but medical, defence ministry, election processes, transportation and urbanization of cities and all at the means of improving quality.

#### **4.1.1 HEALTHCARE**

We already know that through algorithms, small and hard to spot abnormalities can be discovered in all kinds of things, from legal documents to financial papers. So it's fitting that the same can be said for healthcare.

"Anything that has to do with specialists, such as doctors that need to learn a lot of things, computers will be able to learn that as well," Lange says.

#### **4.1.2 TRANSPORT**

With machine learning, you're ready to open vehicles to a huge number of potential situations and ensure the PC in the vehicle, transport or truck acts with a specific goal in mind.

If we look at self-driving cars, if the computer within the car can learn as we know it can to drive that car around that's a massive step forward.

The reason we've not been able to do this until now is because we've had lots of software engineers, but we need to programme it to handle all kinds of situations and that's where machine learning has come into it.

I think transportation is a big one, because transportation will be made much more efficient, not just by the creation of self-driving cars however.

#### **4.1.3 EDUCATION**

The utilization of VR and AR in education has just been demonstrated, with understudy specialists ready to rehearse life-like restorative techniques and kids ready to investigate nations without leaving the study hall. Education will be large. We've not got a system that can learn how to teach you on a very individual basis, rather than one size fits all. While the classroom teacher will still exist, the ability to quickly curate lessons for struggling individuals is possible with machine learning, he explains.

#### **4.1.4 CLIMATE CHANGE**

ML can prove to be a game changer in addressing this global issue. ML can control road lights, which can thusly help in decreasing vehicle emanation, it tends to be utilized to outline earth's surface which will help in finding deforestation, water deficiencies and alarm about other geological changes [14].

### **4.2 NEGATIVE IMPACT OF MACHINE LEARNING ON SOCIETY**

As there are numerous benefits of Machine Learning on the society, there are negative impacts as well. These impacts should not be ignored as they can prove to be a threat to us. One of the negative impacts is unemployment. As there is increase in automation, ML algorithms can outperform humans in most jobs and fields, this would lead to mass employment. From self-driving cars to video editing, algorithms are being used everywhere. ML is capable of creating lethal weapons which can be used for mass destruction. Fake news and videos are another negative aspect. As deep learning becomes better at creating fake videos, there is a high risk of negative and fake news being spread around the world.

#### **4.2.1 TIME & RESOURCES**

ML needs enough time to let the algorithms learn and develop enough to fulfill their purpose with a considerable amount of accuracy and relevancy. It also needs massive resources to function. This can mean extra prerequisites of PC power for you.

#### **4.2.2 HIGH ERROR SUSCEPTIBILITY**

Machine learning is self-governing however exceptionally powerless to blunders. Assume you train a calculation with informational indexes sufficiently little to not be comprehensive. You end up with one-sided forecasts originating from a one-sided preparing set [17]. This prompts unessential commercials being shown to clients. On account of ML, such botches can set off a chain of mistakes that can go undetected for significant stretches of time. And when they do get noticed, it takes quite some time to recognize the source of the issue, and even longer to correct it [17].

## V. CONCLUSION

Artificial Intelligence despite many challenges now have a potential to really fast pace itself as significant research in going for its development. Around the globe, each and every person would love to have a smart home. To achieve this, we need to perform the automation and that automation can be done with the help of ML and AI. These are the reasons, why these two topics are one of the hot topics in the recent times. Sometimes, It feels like artificial intelligence will replace humans in almost every aspect that we can think of but it's good for the bettering the quality of life.

## ACKNOWLEDGEMENTS

I am thankful to my college for giving us opportunity to make this project a success. I give my special thanks and sincere gratitude towards Prof. Sonia Dubey for encouraging me to complete this research paper, guiding me and helping me through all the obstacles in the research.

Without her assistance, my research paper would have been impossible. Also I present my obligation towards all our past years teachers who have bestowed deep understanding and knowledge in us, over the past years. We are obliged to our parents and family members who always supported me greatly and encouraged me in each and every step.

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