

# How is Artificial Intelligence Transforming the World?

## Outline

### 1. Introduction

Thesis Statement: Artificial Intelligence (AI) having resounding merits in the fields of medicine, economic growth, climate change, transportation, industrial engineering etc, AI has demerits in that it can be used for criminal activities such as exploitation of information, money laundering, terror financing and loss of jobs.

### 2. How Artificial Intelligence is Transforming the World

#### a Artificial Intelligence transforming personal life experiences;

- (I) AI enabled devices like Alexa revolutionizing household experiences
- (II) AI helping humans in making better choices

#### b Artificial Intelligence transforming medical sector;

- (I) Telepathic doctors
- (II) AI helping in better diagnosis of patients
- (III) AI revolutionizing the battle against pathogens

c Economic sector is altered for good;

(I) Augmenting the economy

(II) AI enabled marketing

(III) Data enabled businesses

catering the needs of customers

(IV) Bringing customers and vendors closer than ever before

d Transforming educational sector;

(I) Individual based learning

(II) Helping teachers in better assessment of students

e Revolutionizing transportation;

(I) Autonomous vehicles

(II) Improving fuel efficiency

(III) Traffic management

f Changing nature of jobs for human beings

g Artificial Intelligence can help advise better strategies to counter climate change

h Increasing yield of agricultural products;

(I) Using agricultural robots

(II) Exploiting crop and soil monitoring

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## 1 Transforming Political Sector

### 3 Fears Associated with Artificial Intelligence

a Invasion of privacy and exploitation of information

b Loss of certain jobs

c Fear of overpowering human beings

d Taking human instinct/emotions out of life

e Creation of built-in biased algorithms

f Accelerated hacking and terrorism

## 4 Conclusion

### Essay

#### How is Artificial Intelligence Transforming the World?

It would be an understatement to say Artificial Intelligence (AI) has taken the world by a storm. The conceptual framework of AI is to

make intelligent machines which can take decisions by their own without human intervention or input. The tech-giants such as Twitter, Facebook, Amazon, etc, are investing billion dollars on AI usages, for they believe it is the future of the world.

Artificial Intelligence has been revolutionizing the world through its astounding features. House Assistants, such as Alexa, are transforming the traditional household experiences. Not limited to this, AI is revolutionizing the medical sector, its applications are helping in better diagnosis and of patients and pathogens. Similarly, AI is transforming economic sector, helping companies in sale increase and consumer retention. Besides that, AI is changing the pattern of education, encouraging individual based learning and helping teachers to assist students in a better way. The most amazing revolution is witnessing transportation sector introducing self-drive cars. Seemingly, AI devise better strategies to counter climate change and political problems. With all these mesmerizing features AI has some fears associated with it. The first fear is the idea that AI is going to overrule human world.

Moreover, AI can be used in criminal activities such as money laundering, exploitation of information, terror financing and loss of jobs. These fears can be allayed if the humanity is to make the most of it.

Beginning with domestic chores and home improvement, the use of AI in this field has improved the living experience. The home assistants equipped with the AI are working from washing to cooking and freezing to mopping the floor. These home assistants not only save energy but also bring comfort and ease. This comfort and ease range from controlling lights and use of televisions and microwave ovens. Similarly, AI helps in making better choices. For example, if someone wants to cut his hairs, AI applications can help him to find a shop or salon, which suits his demands, pocket and style. In the same way, AI is also helping human beings come closer to each other than before, ending their biting loneliness. For example, social media is using AI bring together people with similar interests, creating their groups of like-minded people, which may point to its uses to further grouping the people for marketing dominance.

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Its most astounding use has, however, taken place in the medical field. AI has revolutionized the field of medicine as it constantly saving patients. For example, through a very accurate procedure it scans the data and helps predict if a patient is susceptible to heart attacks or strokes. This machine learning ability is enabling individuals to monitor their health through devices such as smart watches, wrist bands, etc. Not limiting to this, AI equipped surgical units have surprised the far-flung terminal patients to undergo operations and live again to see the world. This revolution of AI made easy to perform surgeries from distances unimaginable in the past. Another aspect of transforming the medical sector through the AI usages has revolutionized the battle against pathogens. By using the available data on a pathogen, AI helping doctors predict future features of that pathogen and devise a combative strategy against pathogens in advance.

Furthermore, AI is seen as an engine of productivity and economic growth. In a journal published by the European Parliament, Accenture forecasts that by 2035, AI could double annual global economic growth rates. It further states that AI will drive this growth in three imp-

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important ways; first, it will cause a robust increase in labor productivity. Second, it will create a new virtual workforce capable of solving problems and self-learning. Third, the economy will benefit from the diffusion of innovation, which will have serious impacts on different sectors on account of its ability to generate new revenue streams.

Another way through which AI is transforming the economic sector is through data usage. Data collected through social media and other mediums, become a handy tool for the tech-giants to cater to the needs of the companies and factories targeting specific consumers. The company can then customize <sup>their</sup> products according to their customers' needs. Thus manufacturers have become able to predict which product their customers want with the help of the AI. In short, AI has transformed the economic sector for good.

In addition to the economic sector, the education sector, too, is undergoing a massive transformation; thanks to the AI usage. The AI is not only helping the students learn better; it is also helping teachers keep record,

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track the record and helps the students based on their interests. On the other hand, it has helped the education authorities to present customized curriculum for the future generations. As far as the students and teachers are concerned, both can utilize the AI based communication tools for cooperation and knowledge sharing. Moreover, the AI has made the teachers difficult tasks of evaluation easier than before. Traditional methods based on examination used to show students have learned but modern methods of data collection, feeding and AI based analysis have enabled teachers to track students overall performance to better advise the students about their future prospects. Thus, the AI is changing the very contours of the traditional educational setup.

Another sector, transportation, too, is witnessing revolutionary transportation transformation through the use of AI. First, autonomous vehicles have already hit the roads around the globe. In this connection, tech-giants are competing to take over the electric vehicles market. Second, driverless cars are becoming another norm that is soon going to flex its muscles,



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while driverless trucks have already become operational in the United States. Another way in which the AI is revolutionizing transport industry is through enhancing fuel efficiency. A computer installed in a vehicle easily assesses how much fuel is required to run that car efficiently. Similarly, traffic congestion, is going to witness solution through AI, as sensors and cameras embedded on roads are going to help collect the minute traffic details to assist commuters avoid congestion, seeking alternative routes. Thus, the AI usage is going to transform the transport sector that it has never been seen before.

Moreover, AI is changing the nature of jobs for men, creating almost a threatening as well as a comforting sense for the people. The robots are now replacing human beings in performing traditional jobs, like the industry workers. Although the people having technical skills earn more, the assembly line production and robotic automations have changed this outlook, too. Although it seems that AI job market is blooming at the moment, the day is not far when it will also face automation, ridding thousands

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of operators jobless. And, it seems comforting that human beings will have leisure to enjoy life, a courtesy of the AI and its waste usage.

Besides that, AI has also proved beneficial for decreasing the impacts of climate change much better than before. For example, recently it has helped in the detection of deforestation through satellite imagery, or aerial imagery, including gathering of data about where buildings, and infrastructure used to stand in the past. Such a move is essential in policy making to deal with climate change issues.

Research from Montreal Institute for Learning Algorithms (MILA), Microsoft, and Conscient AI Labs used GANs, a type of AI, to stimulate what homes are likely to look like after facing dangerous damages from rising sea level, and violent storms. Similarly, AI enabled computers help analyze a load of data to predict the next seasonal change. The day to day weather forecasting is based on the same logic. It also helps in predicting future floods based on weather pattern and water level in the rivers. Using these predictions, meteorologist can prepare the public to counter the future catastrophic

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in advance. Not only that, but also the AI can help in tracking our progress in the fight against global warming.

Last but not the least, AI technology contributes to the development of political theories in proportion to reality, and in building new foundations in political action that have the ability to understand the pattern and challenges facing the future of political powers and governments. It provides a broad database that enables decision makers to make decisions quickly and effectively, help them manage crisis and find quick solutions to complex political problems by analyzing and interpreting information, monitoring the process of treaty, bilateral and multilateral treaty, conventions and alliances. In the diplomatic field, AI has had an indirect impact in changing the dynamics of the diplomatic work by supporting the functions of diplomacy and the daily tasks of diplomats. Developing modern diplomatic means, today called digital diplomacy based on virtual space, negotiating, exchanging views and discussions between the diplomats, and improving communication between governments and the foreign public by reducing

language barriers between countries is yet another smart contribution of AI. For example, the Chinese Foreign Ministry announced its plan to use AI technologies in China's Belt and Road Initiative to facilitate the work of diplomats and to benefit from the information and data provided by AI technology. In brief, AI is transforming political sector for good.

These highlighted AI merits demonstrate its bright future in the situation when giants like Mark Zuckerberg have stated, "AI is a boon bestowed upon us and it will positively affect our lives in multiple ways." Contrary to his statement, Elon Musk, another tech innovator, argues, "AI will undermine our freedom and security and be detrimental to the survival of the human race in the not so distant future." This categorical statement by a tech innovator highlights challenges that AI is going to pose to the human race in the shape of its demerits.

Firstly, AI poses a serious challenge through its invasion of human privacy, and exploitation of the information gathered about

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individuals. Given its pervasive intrusion in general life, it is able to trace and analyze each move of a person, for cameras installed at every other place in cities use facial recognition algorithms. The case of U.K.'s Brexit vote illustrates AI's power for social manipulation. By spreading data to people known through algorithms, and private information, AI targets them, and reveals data ~~disagreed~~ ~~disregard~~ of the personal consent or validity of the data retrieved, or obtained.

Briefly putting it, AI is posing a serious challenge to human privacy, and personal identification information.

Secondly, as machines are taking over majority of the manual work, there will be time when there is very less manual work left for human beings, triggering a mass unemployment, and this is already happening on industrial scale that artificial intelligence-based systems, and chatbots are taking e-commerce industry by storm. Since 2000, robots and automation systems have slowly phased out many manual facturing jobs - 1.7 million of them, but on the other side it's predicted that AI will create 97 million

new jobs by 2025. In short, it seems that AI machines are going to take over human jobs more than it is expected.

Thirdly, while AI presents tremendous opportunities, people are uncertain of its likely impacts, and are picturing possible worst-case scenarios, including complete overtake of the human affairs, and incapacitation of human abilities. Experts, researchers and scientists often issue warning statements that we, as human beings, are creating a new god that can either be merciful and good, or vicious and evil. According to AI researchers, machines are predicted to be better than us in translating language by 2024, writing high school essay by 2026, driving a truck by 2027, writing a best selling book by 2049 and doing a surgery by 2053. In fact, it seems that all human jobs will become automated within the next 120 years. In this scenario, it is likely that AI enabled machines are going to replace human beings.

Moreover, since AI algorithms are man-made, they can have built-in biased inserted into the algorithms intentionally or inadvertently. If AI algorithms

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are built with a bias, or the data is compromised, it is certainly the case that the results are biased. This reality of biased or compromised data could lead to unintended consequences. In 2019, researchers found that an algorithm used in US hospitals to predict which patients will require additional medical care favored white patients over black patients. Because the expense of healthcare emphasizes on individual's healthcare needs, the algorithm considered the patient's past healthcare expenditure. In short, there must not be intentional, or inadvertent data insertion into machines through AI algorithms.

Last but not the least, AI has led human beings to increase the speed of human performed tasks, and in some cases, it exceeds our abilities. With automation nefarious acts such as phishing, delivery of viruses to softwares, and manipulation of AI operated systems seem to become difficult for humans to control. Similarly, there may be new AI-enabled form of terrorism to deal with due to the expansion of autonomous drones, and the introduction of robotic swarms to remotely attacks, or the delivery of disease through nano-robots. The law enforcement

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and defence organisations will need to adjust to the potential threats these scenarios pose.

Putting it briefly, it is correct to state that the AI is revolutionizing the modern world. It has transformed every facet of human life. For example, in the field of medical, it has brought revolution in diagnosis, data tracking history and distance surgical procedures which have been unheard of in the past. It has revolutionized mostly every field of life such as economy, education, transportation, changing personal life experiences, political sector, etc. However, the amazing thing is that this is just the beginning. The future based on the AI seem to be mind-blowing as well as mind-boggling. On the other hand, there are fears associated with the usage of AI such as terror-financing, money laundering, loss of jobs, etc. These fears are valid, and they will have to be assuaged if the world is to make maximize its benefits.