

(3rd)  
Essay topic : Artificial Intelligence:  
new opportunities  
and threats

Outline

I. Introduction

**Thesis statement** : Artificial intelligence presents unprecedented opportunities for efficiency and innovation across various sectors. However, the rapid advancement of AI also raises substantial threats including ethical concerns and security risks.

II. Concept of Artificial Intelligence

III. New opportunities created by Artificial Intelligence

(A) Developments in the capabilities of the global system

(B) The crucial role of Artificial Intelligence in advancing health system

(C) The potential to revolutionize transportation system

(D) The development of smart cities with the help of AI

(E) Progress in the field of agriculture

(F) Evolution in the nature of interactions in the global system



- (G) Development of sustainable solutions to deal with environmental challenges
- (H) Use of AI in humanitarian assistance

### III. Threats of Artificial Intelligence

- (A) A threat to democracy
- (B) Evolution in the nature of wars and threats
- (C) A leading cause of unemployment all over the world for the time being
- (D) Algorithmic bias perpetuates discrimination
- (E) Data privacy and security issues
- (F) Chances of lose of control over Artificial intelligence
- (G) Shifting the state sovereignty from national sovereignty to people's sovereignty
- (H) AI raises ethical dilemmas

### IV. Recommendations to tap the new opportunities of AI

- (A) By establishing transparent algorithms



(B) By designing ethical framework  
to avoid ethical issues

V. Conclusion



## Essay

Artificial Intelligence is like a digital bird, soaring through information to learn and adapt. Much like a bird navigates the skies, AI processes data to understand and respond effectively. Artificial intelligence has opened the doors of numerous new opportunities. It has brought revolution in the development of global capabilities. The health sector is also evolving with the help of AI. Furthermore, AI has catalyzed the development of smart cities, and has improved the transportation sector. Agriculture is also enjoying the fruits of AI. Similarly, AI has brought a change in the global interactions and has provided sustainable ways to deal with environmental challenges. Finally, humanitarian assistance is also improving with the help of modern algorithms. However, AI has significant threats as well. The foremost among them is,



it is a threat to democracy. The evolution in war tactics and a massive unemployment are the outcomes of AI. In the same manner, algorithm bias perpetuates discrimination. Data privacy and security are also threatened by AI. Moreover, there are chances that humans might lose control over AI. Then it will have disastrous consequences for humanity. In order to save humans from its negative consequences, there is a need to establish transparent algorithms, and to design an ethical framework. In a nutshell, AI has unprecedented opportunities for bringing a positive change. However, it has a dark side as well in the form of data manipulation and security concerns.

Artificial intelligence is the science of making intelligent machines that can learn, at least somewhat like human beings do.



It is a term coined by emeritus Stanford Professor John McCarthy in 1956. The goal of AI is to produce independent intelligent machines and robots capable of performing complex tasks using reflexive processes similar to those performed by humans such as thinking, learning - creating and communities. It has two sides - one is bright and other is bleak.

The new opportunities generated by AI are innumerable, a few of them are discussed in the given below paragraphs.

The foremost opportunity is developments in the capabilities of the global system. They include a seismic shift in the military sector, a significant change in the economic field, and a substantial evolution in the political field. On the military side, AI has contributed to use of drones,



to follow enemy movements and direct remote communications, to change the aspects of war, to develop the means of cyber warfare and sophisticated air defense. In the economic field, AI is expected to contribute \$13 trillion to the growth of the global economy, an increase of about 1.2 per cent annually by 2030. In the political field, AI has changed the mode of elections and has altered the perceptions and the minds of masses. Hence, AI has improved the global system through different developments.

Conjointly, AI is playing a pivotal role in the advancement of health sector. It is improving diagnostics, treatment and medication day by day. For example, the Deepmind AI system is used to analyze retinal scans to detect diabetic retinopathy, a leading cause of blindness. In a



study with the Moorfields Eye Hospital in the UK, the AI system achieved a level of accuracy comparable to human experts. This technology can help in early detection and prevention of vision loss due to diabetic retinopathy. Thus, AI is doing miracles in the health sector.

Similarly, the transportation system can be revolutionized through AI. By making learning machines, the use of automobiles can be automated. Likewise, the precision and accuracy will be improved in the formation and the use of vehicles. Waymo, is a leader company in the development of autonomous vehicles. Waymo's mission is to make transportation safer and more accessible by using AI and self-driving technology. It has developed a fleet of autonomous vehicles equipped with advanced AI systems,



including Lidar, radar, cameras, and machine learning algorithms. Therefore, AI is leading the transportation system towards a revaluation.

Correspondingly, the dream of making smart cities can be catalyzed by using AI. The AI is very helpful in the development of smart cities, optimizing resource allocation and improving the life for residents. Singapore has been a pioneer in using AI to manage traffic and reduce congestion. The city implemented the Smart Traffic Management system, which uses AI algorithms to analyze real-time traffic data from cameras and sensors. The system adjusts traffic signal timings dynamically to optimize traffic flow. It has resulted in reduced congestion, shorter travel times, and lower carbon emissions. In this way, AI is helping in building smart cities.



Furthermore, the agriculture sector is also progressing with the help of Artificial Intelligence. The agricultural output is increasing with the help of AI which is optimizing crop yields, monitoring soil conditions, and predicting pest outbreaks. Blue River Technology developed a revolutionary AI-driven solution for weed detection and precision spraying. Blue River's "See and spray" technology uses computer vision and machine learning to identify individual plants in real time. It can distinguish between crops and weeds and selectively apply herbicides only to the weeds. Hence, AI is bringing a positive shift in the agriculture sector.

Additionally, AI is bringing an evolution in the nature of interactions in the global system. It is the reason behind the changing world order. For instance, China



is the number one competitor to the United States, which is seeking to acquire AI technologies, and since 2017, it has begun to prepare a comprehensive strategic plan to reach the center for Global Innovation in AI, and employ it in the military, economic and political fields by 2030. China's funding for AI startups amounted to 48% of the world's total project financing, surpassing the USA. In this way, there is a clear shift in the nature of interactions in the global system due to AI

By the same token, AI is helping in the development of sustainable solutions to deal with environmental challenges. It is providing the efficient alternatives of energy consumption. Moreover, it is also useful in removing environmental waste. For example, The Ocean Cleanup



is a non-profit organization that uses AI to remove waste from oceans. It uses AI to analyze data on ocean currents, plastic concentration, and other variables to deploy their cleaning systems more effectively. Hence AI has potential to deal with environmental challenges by providing sustainable solutions.

Along the same lines, AI has boosted the process of humanitarian assistance. It aids in disaster response, resource allocation and data analysis. The book **"Artificial Intelligence in Humanitarian Action"** by **United Nations** and **XPrize Foundation** explores how AI technologies can be harnessed to address humanitarian challenges effectively. It delves into case studies and strategies, showcasing the potential of AI in optimizing and delivery and



improving crisis management. Now there is humanitarian crisis in Palestine due to brutal actions of Israel. In this case, AI can be used to track endangered areas, to provide food, and to displace the innocent children, men, women and old people from the war torn areas. Consequently, many lives can be saved with the help of AI.

On the other side, Artificial Intelligence poses a number of threats, the prime among them is, it is a threat to democracy. It has potential to sabotage democratic values. For example, facial recognition technology powered by AI can be used for mass surveillance. Governments and organizations can use this technology to monitor citizens, infringing on privacy rights and potentially suppressing political dissent. In 2018, it was revealed that the political consulting



firm **Cambridge Analytica** had harvested data from tens of millions of Facebook users without their consent to influence political campaigns. Hence, AI is a potential threat to democracy and democratic values.

Likewise, AI has changed the nature of wars and their dynamics. It has turned them into more destructive and lethal. According to press reports and statements from the Israeli military, Israel used the Gospel and other AI programs to identify likely targets such as rocket launchers. AI also enables the army to conduct extensive strikes on residential homes, even targeting the innocent children and pregnant women. According to the Aljazeera report, more than 16000 casualties had happened due to deadly attacks of Israel



since the start of Israeli operation "Iron sword". Therefore, AI has altered the dynamics of wars altogether.

Similarly, Artificial Intelligence is a leading cause behind the unemployment all over the world, although it is transitory in nature. Due to shift in working criteria, many people do not have skills to meet that criteria. However, AI can create an alternative job market, it depends upon how humanity adapts itself. As mentioned in the book, "Humans Need Not Apply" by Jerry Kaplan, that how automation and AI technologies contribute to work force displacement, emphasizing the need for proactive solutions to address these challenges. AI has minimized the dependence on manual tasks, now these are performed by robots.



Therefore, AI is causing unemployment across the world.

In the similar vein, algorithmic bias perpetuates discrimination.

In 2018, it was reported that Amazon had developed an AI-based recruiting tool to help streamline the hiring process. It was trained on resumes submitted over a ten-year period. However, the majority of these resumes were from male candidates due to historical industry imbalances. As a result, the AI system displayed gender bias, penalizing resumes that contained words or phrases associated with women. The system effectively perpetuated gender discrimination in hiring.

Conjointly, AI is a threat to data privacy and security. The use of AI in surveillance can have detrimental



effects on society. People are afraid to express their views or engage in political activities for fear of being monitored. For example, in China, the "social credit system" is like a persistent online nanny, constantly monitoring citizens' behavior and handing out grades like a tough elementary school teacher. Another example is leaked audios and videos, it is a sheer breach of privacy with the help of AI.

Correspondingly, there are chances, humans might lose control over AI. This alarming point is raised by many historians and scientists. Yuval Noah Harari is one of them. He has mentioned in his book, "Homo Deus: A Brief History of Tomorrow" that humans may lose control over AI. He explains the challenges posed by



advanced artificial intelligence, raises questions about the implications for humanity's autonomy and decision making. He points out that the balance of power between humans and AI could shift, prompting reflection on the ethical and social consequences of such a paradigm shift. So AI can be taken as an existential threat to humans freedom.

Another risk posed by AI is shifting the state sovereignty from national sovereignty to people's sovereignty. It is due to increase in the strength of traditional companies, particularly global technology companies such as, Apple, Microsoft, Amazon, Google and Alibaba. They have been able to impose sovereignty over the digital space, thanks to the power of its algorithms and services, provided to its users,



reaching to 4.7 billion people in 2023.

Hence, AI is a threat to nation's sovereignty.

Last but not the least, AI raises many ethical dilemmas. Deepfake technology uses AI and machine learning to create realistic-looking videos and audio recordings of individuals saying or doing things they never actually did. During the 2018 general election campaign in the United Kingdom, a video of the leader of the Labour Party, Jeremy Corbyn, was manipulated using deepfake technology. The video portrayed him as endorsing the Conservative Party's policies. While it was quickly identified as a fake, it highlighted the potential for deepfake videos to influence public opinion during political campaign. Hence

AI has some ethical consequences which cannot be overlooked.



However, the potential opportunities provided by AI can be tapped by taking some practical steps, the prime among them is the establishment of transparent algorithms. Like the European Union's regulation proposal, it emphasizes transparency, including requirements for AI systems to be understandable and capable of explaining their decisions. Moreover, open source algorithms and explainable AI in various domains, from criminal justice to healthcare and technology companies are very important. Advocating for transparency and accountability in AI development and deployment is essential to ensure that AI systems benefit society while upholding ethical standards and fairness.

Another way to deal with the threats of AI is the formation of ethical framework



in order to avoid ethical issues. Ethical framework can help strike a balance between security and privacy. For example, the European Union's General Data Protection Regulation (GDPR) sets clear rules for the use of biometric data, including facial recognition, ensuring individual's rights are respected. Similar steps are needed in order to effectively utilize AI. In this way, ethical issues and security issues related to AI can be addressed.

To conclude, Artificial Intelligence presents multiple opportunities. They include strengthening health care system, developing smart cities, revamping transportation sector, innovating agriculture sector, developing sustainable solutions against climate change, and assisting in humans welfare. However, it has a dark side as well. It



poses a number of threats to humanity like; a risk to democratic values, a surge in the fatal ways of war, an increase in unemployment rate, a rise in gender discrimination cases, and an increase in the rate of ethical issues. Moreover, there is a significant threat that humans may lose control over AI. However, timely interventions can save humanity from the threats of AI. These are the formation of ethical framework, and the establishment of transparent algorithm. By taking these steps, new opportunities created by AI can be tapped.