

AI: Its Merits and Demerits

Outline:

1. Introduction:

Thesis Statement - Artificial Intelligence is a mixed blessing, which on the one hand serves mankind with its miraculous advancements, and on the other hand delivers deleterious footprints.

2. What is meant by Artificial Intelligence?

3. Merits of Artificial Intelligence:

3.1 Upgrading the field of medicine

3.1.1 Improving diagnostic imaging

3.1.2 Promoting personalized monitoring

3.1.3 Report of The Journal of mHealth and CNN

3.2 Augmenting economy

3.2.1 Increasing labour productivity - Research of National Bureau of Economics Research

3.2.2 Making inestimable calculations

3.3 Increasing national security

3.3.1 Protecting Critical Cyber networks

- Snorkel Flow usage by United State's government

- cases of Indian actors Rashmika Mandanna and Ranvir Singh

- Social media influencers Ducky Bhai's wife Aroob Jatoi is also a victim of fake AI generated videos

- Irregularities traced by Azma Bukhari

4.2 Leading unemployment

4.2.1 Replacing manual work with machines

4.3 Accelerating hacking, Terrorism and crime

4.3.1 Introducing robotic swarm to attack remotely

4.3.2 AI benefitting offensive strategies of authoritarian regime

- Advanced technology of Israel causing bloodbath in Gaza

4.4. Overpowering human beings

4.4.1 Making it impossible for humans to control machine damage

5. Conclusion:

- cases of Indian actors Roshmi Mandana and Ranvir Singh
- Social media influencers Ducky Bhai's wife Aroob Jabot is also a victim of fake AI generated videos
- Irregularities traced by Azma Bukhari

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~~Russia getting more violent towards Ukraine~~

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5. Conclusion:

Artificial Intelligence - like stimulator
of human intelligence in a machine - has long
gone from delusion to necessity in today's
world. It has been most progressive develop-
ment in last two decades, intruding into
every known human field. Although AI
is not a frustrated vision, it underpins
everyday life in several disciplines like
health, finance, national security, environment
and agriculture. From helping professional
doctors in saving lives to identifying
criminals, AI has proved itself out and
out miraculous. Likewise, the use is equally
significant in augmenting economy, detecting
erratic criminal changes and increasing
agricultural yield. However, it has also
become a controversial arena on account
of threats it poses to human beings.

A machine which is proving itself smarter
than humans can pose a great risk. For
instance, on social media platforms it
has control over people's engagements
and invade users' privacy. Another
fear is AI's possible overrule on humans
because almost every field is dependent
upon it. Furthermore, it is also

increasing unemployment and empowering authoritarianism. In reality, Artificial Intelligence is a mixed blessing, which on the one hand serves mankind with its miraculous advancements, and on the other hand delivers delirious footprints.

Artificial Intelligence is a term used to describe machines performing human like cognitive processes such as learning, understanding, reasoning and interaction. In fact, it is a scientific field that uses a computer to store data and responds to robotics and machines for specific commands based on stored data. In simple terms, AI is the ability of a system to think, learn, and perform tasks based on the instructions it is fed with. However, AI that has started engulfing every walk of human life comes with its merits and demerits.

To begin with its merits, artificial intelligence has revolutionized the field of medicine. It has been beneficial not only in diagnostic but also in therapeutic treatment. For instance, through very accurate diagnostic scans

like mammography, computed tomography, echocardiology etc. AI helps predict if a patient is susceptible to breast cancer, brain injury, or stroke. Moreover, machine learning enables individuals to monitor their health through personalized medicine devices such as smart watches, android phones, walking bands, etc. The electronic health record is an electronic version of patient's medical history stored by personalized devices. "It has been estimated that AI can reduce 86% of errors made by healthcare workers which could save 250,000 lives each year" - Report of the journal of mHealth - According to a report published by CNN, AI helped healthcare workers detect 20% more cases of breast cancer. Briefly, AI has completely transformed medical field and decreased death rate globally.

Significantly, AI plays the role of diesel in the engine of economy. Rapidly advancing computing capability with accuracy has made it

attainable to assemble, calculate and transform large volumes of data in no time. Moreover, AI has also increased labour productivity at a virtual workforce capable of solving problems and self-learning. A research conducted by author and academic Erik Brynjolfsson revealed that AI assistance improves productivity by 14% in white collar occupations. Alongwith this, generative AI can improve a highly skilled workers performance by nearly 40% compared with workers who don't use it. National Bureau of Statistics states that AI could handle 13-27% more consumer inquiries per hour and programmers who used AI could code 126%^{more} projects per week. Cutting it short, AI has imposed unprecedented impacts on various production sectors because of its ability to generate new revenues, thus, accelerating economic growth at prodigious rate.

Additionally, the recent breakthrough of AI is gradually reaching a point where it can be used for national security

and military applications. For example intrusion detection - an important part of cyber security to detect malicious network activity before it compromises information availability, integrity, or confidentiality - work on principle of AI to protect critical cyber networks. For instance, US government agency uses Snorkel flow for application, classification and network attack detection. The US Cybersecurity Director Jen Easterly emphasizing AI's potential in cyber-crime said that it is the most powerful weapon of our time. Another area of AI's national security service is penetration testing which works together with sensor systems and threat evaluation.

Moreover, AI proved ^{and} benefit for reducing the impacts of climate change. For example, it has helped detect deforestation through satellite imagery, including gathering data about where buildings and infrastructure used to stand in the past. Deep learning models of AI help

in this regard. Also, techniques like YOLO (You only look once) and region based CNN assist in identifying specific objects in satellite imagery and enable identification of human activities that are impact forests. Such techniques are essential for policy making regarding weather. Researchers from Carbon Tracker - an independent financial think tank are working towards United Nations' goal of preventing the operationalization of new coal plants by monitoring coal plant hazardous emissions with satellite imagery. The gathered data is then used to convince the energy production industry to stop installing carbon energy plants due to their dangerous environmental impacts. So AI may prove drastically beneficial in reducing the risks involved with fast climate change.

Lastly, the agriculture industry has made tremendous progress with the use of AI. Companies are already developing

and using autonomous robots to handle essential agriculture tasks such as crop harvesting on a huge scale and faster pace than human labour. South Indian states are yielding crop under the project of 'Sagu Bagan' ^{top}. Farmers has produced ~~7000~~ bulk of chillies through AI tools and Telugu language Chatbot. According to Forbes magazine 21% increase is witnessed by farmers in India through AI techniques. World Economic Forum states that sales price is increased by 87% as a result and Sagu Bagan program is extended up to 500,000 farmers. In addition many companies now leverage computer vision algorithms to process data captured by drones to monitor crop and soil health issues. The gathered data can also be used to detect soil deficiencies, plant pests, and crop irritants to extract data needed for proper treatments, thus increasing the yield of crop worldwide.

Despite certain benefits, AI

also possess severe threats to humans in the form of elements. As Elon Musk aptly says, "Artificial Intelligence would undermine our society and be detrimental to the survival of the human race in the not so distant future." First, AI is invading human privacy and exploiting information. For instance, in case of social media, the algorithms have substantial control over its users' engagements and propagandize them in target marketing and selling. The case of UK's Brexit vote illustrating AI power to social manipulation is one such example in which AI has been used destructively. Authoritarian governments use AI for surveillance and tracking of its citizens. China is a leading player in this regard, while other countries like Russia and Iran are also following the suit. Yuval Noah Harari in his book 'Homo Deus' has already stated that AI has abetted China in generating its 'Great Fire Wall of China'. This surveillance system of China detects people's activities by tracking them and facial recognition everywhere. On the basis of this citizens are

rewarded and/or imprisoned. Resultantly, AI has led to the suffocation of Chinese nationals. Not only this, but cybercrimes like deep fake videos and fake voices are also surrounding on social media causing psychologically ill society. For instance in November 2023 man used Rashmika Mandanna's (an Indian actress) face onto the face of another woman, by allegedly using AI to get more followers. Similarly, Ranvir Singh, an actor by profession, has filed case against his fake video, in which he is showed exploding a political party, and criticising Prime Minister of India. Another video of a social media influencer Ducky Bhai's wife Azob Jatoi also became the talk of the town after being subjected to fake AI editing. It is not only the case with actors, civilians or social media influencers, but government officials are also facing the same turmoil. Azma Bukhari, who is provincial information minister of Punjab is also brought her case in court against her doctored videos. Therefore, it is evident that AI has proved detrimental

to human privacy and personal identical information.

Secondly, since machines are taking over most manual work, the excessive dependency on AI based devices leads to massive unemployment. It is already happening on an industrial scale, where AI based systems and chat bots take the e-commerce industry by storm. It may seem an exaggeration, yet AI will play an important role in executing tasks and processing in a better way than that of humans. Industries such as manufacturing, transportation, and retail are particularly vulnerable to AI automation. For instance, autonomous vehicles could displace millions of truck drivers, while AI driven robots in manufacturing could jettison human workers. A report by McKinsey Global Institute estimates that by 2030, up to 375 million workers worldwide may need to switch occupations due to automation. The impact of AI on unemployment is expected to be uneven, disproportionately affecting low skilled and repetitive jobs, and resultantly causing social unrest.

Thirdly, AI operated systems are likely to be used for nefarious acts, such as delivering viruses to softwares, manipulating systems and hacking sensitive projects. Since, AI is way faster and more capable than human reach, it would be almost impossible for man to control the machine based threats to human existence. Similarly, there are many AI-enabled forms of terrorism to deal with due to introduction of robotic swarm to attack or deliver disease remotely. Moreover, superpower countries like Russia are using AI supported drones in battlefield. Russia have been using these drones since 2023 and have been testing kamikaze drones for 'mass synchronised swarm attacks'. Fatalities of AI based terrorism and crime does not end here. Israel widely accepted a terrorist country in its bombing campaign in Gaza^{is} using a previously undisclosed AI-powered database that at once stage identified 37,000 potential targets based on their apparent links to Hamas. Hence, AI-initiated terrorism is more

destructive than great wars of history.

Last but not the least, AI pictures possible worst-case scenarios, including a complete over take of human affairs and the incapacitation of human abilities.

Experts, researchers and scientists often warn that human beings are creating a new God that can either be merciful or evil. According to AI researchers, machines are predicted to be better than ~~the~~ humans in translating languages in 2024, driving truck by 2027, writing best selling book by 2049, and doing surgery by 2053. Atoa Yaal Noah

Wassiri also foresee AI future as it will either create global empire or divide the world by silicon curtain. Experts worry that if they keep entrusting key tasks to them, they could trigger what Elon Musk has called 'Civilization Destruction'

In a nutshell, Artificial Intelligence is a machine learning that has resulted in a thrust of technological advancements. Man's greed of achievement did not stop at industrialization or computerization. The search

of more and more ^{has} brought men on the door of ^{the} most advanced and civilized automated technology. Though, AI has brought series of advancements in various fields and has made life easier than ever before. AI has developed commerce regulatory mechanisms, medical expertise, security, environmental regulations and entertainment. However, as stated, with perks come to the perils; the biggest dilemma people face is the machine dominating human beings, leading to unemployment, terrorism, invading privacy, ^{and} hacking. Nonetheless, regardless of constructive and destructive consequences, AI has taken humans to the devil and the deep sea. Therefore, it is high time, researchers and professionals limit their goals of AI enabled systems to control the ensuing issues before computers overtake humans and bring complete destruction of humans.

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