

"Artificial Intelligence" : A double edged sword"

OUTLINE

1 Introduction

Thesis statement:

With the technological upheaval, rise of AI is an important landmark of 21st century. It has enabled man to step in the world of innovations that comes with both opportunities as well as ~~challenges~~. However, a careful and controlled use of AI can overcome these challenges.

2. How AI is a double edged sword.

Crunch paragraph should be about elaboration of key terms

3 Opportunities provided by AI

Macro Level Analysis

Economy

i. AI has enhanced the productivity.

Healthcare

ii. Assisting the healthcare professionals in diagnosis.

Education

iii. Revolutionized the learning methods.

Politics

iv. AI in politics help in conducting campaigns.

Commercial Justice System

v. Enhanced the accuracy and transparency in legal practices.

Financial Services

vi. Enabled the personalized services and products in financial services.

Transportation

vii. Automation of vehicles.

6 MicroLevel Analysis

i. AI in daily lives.
Used in social media, domestic chores, mobile phones.

Add entertainment side of AI as well.

4 Perils of Artificial Intelligence

Unemployment

i. Automation replaced human jobs.

Social discrimination

ii. Fueled the biases in data.

Privacy breaching

iii. Concerns for misuse and unauthorized access to sensitive information.

Lack of accountability

iv. Questions on who is liable for unintended consequences become more pressing.

iv Autonomous ~~weapons~~ powered by AI

v AI has fueled the arms race among countries.

Ethical concerns.

vi Biased decisions, unethical contents and decisions in health and CTS raised questions.

5 Measures to mitigate the risks of AI

i International consensus is the need of hour.

ii International recognition of AI is necessary.

iii International, regional and central organizations to regulate AI

iv Education and awareness campaign

6 Conclusion

In today's modern world a super smart tool, that is prevailing works like a captivating magician performing mind-boggling tricks in front of the eyes, but with some unexpected twists and blunders. This is how Artificial Intelligence is unravelling the mysteries of a double edged sword. This shows that, as world dives deeper into the modern world, the field of artificial intelligence presents a unique paradox with remarkable advancements as well as presenting the perils that best fits the AI is playing a double edged sword - game. Artificial Intelligence is being witnessed in almost every sector, from micro to macro levels, it provides opportunities in every aspect of life. AI is being installed in Agriculture, healthcare, Education, Political justice system, financial services, transportation Manufacturing, and Human resources to the micro level usage as in social media applications, its usage in daily life. On a flip side, Artificial intelligence perils are the matter of concern. Increasing unemployment, social discrimination, Privacy breaching, lack of accountability, security threats, ethical concerns, lack of transparency are problems posed by AI. However, several doable measures can be taken to ensure safe use of AI. Reskilling the workforce, privacy measures, establishing ethical guidelines for AI's use, encouraging transparency and

and sound policies can help to mitigate the risks of AI. With the technological upheaval, rise of AI is an important landmark of 21st century. It has enabled man to step in the world of innovations, that comes with both opportunities as well as worries. However, careful and controlled use of AI can overcome the challenges.

Artificial Intelligence is generally thought to refer to "machines that respond to stimulation consistent with traditional responses from humans, given the human capacity for contemplation, judgment and intention." Artificial intelligence has indeed revolutionized the modern day life styles, offering the ease and timely work in every sector. Opportunities provided by artificial intelligence may outweighs its perils; yet, these perils are posing threats in every sector as well. Artificial intelligence is actually presenting itself as a double edged sword, that prepares humans and on the broader level countries for the best as well as worst. It is already altering the world and raising important questions for society, the economy and governance.

Artificial intelligence is already integrated and deployed in almost every sector. To begin with the advancements brought by the AI is **Evident through** efficiency and productivity, providing the tremendous opportunities for the employment as well. Deployment of machines in the industries has enabled the man to take multiple works and repetitive tasks from machines in a limited time, which a human can do in several hours. This has made the market sector competent enough. Moreover, AI is also doing wonders in agriculture sector to boost the yields with modern techniques. It has enabled farmers to minimize their input by increasing their per acre yield. Such as, **Farmdar** a digital solution developed specifically for farmers, it provides **enabled** analytical solution for crops. Thus, by fostering a culture of innovation, Pakistan maybe able to drive further economic growth and development.

Similarly, Artificial Intelligence in health care is also doing wonders, assisting healthcare professionals in diagnosis of diseases. Electronic health records in healthcare is helping to collect, store, access and analyse the complicated medical data to design the effective treatment. AI has enabled the robots

to perform surgeries, detecting the diseases such as, **CT scan, MRI machines, endoscopy techniques** are few examples of healthcare system that has enabled the doctors to perform outstanding work with the detected diseases. Moreover, **PathAI** US based technological company using AI to detect cancer at early stages. Conclusively, modern problems need the modern solutions. Healthcare facilities around the world are using AI to perform better in emergency situations.

Furthermore, Artificial intelligence has taken the world by a storm. It has provided the advancements in educational sector as well. Empowered the students to learn with modern methods and with no boundaries. It has facilitated the students to gain the diversified knowledge from all across the globe. Additionally, AI has equipped the students with a robotic learning of **ChatGPT**, providing the information from the range of sources within seconds. For students it means an oceans of **content** knowledge flowing freely. It actually helps the students to learn smartly on their own. Many platforms are being used by teachers and students to get most of it and learn in modern ways. Such

as, **VILLE**, AI based platform in Finland offers students and teachers detailed information, plenty of exercises in different subject areas. So, with technological revolutions, education sector is also being assisted by Artificial Intelligence.

Along with all the advancement in various sectors, politics is not an exception. AI models in politics has helped in conducting the political campaigns. It has enhanced and revolutionised the interaction between the public and political leaders. Public can know the agenda of their political leaders, developments and future visions.

Similarly, with the innovations of AI in the politics, rigging that was prevailing in polling stations has comparatively reduced with the introduction of electronic voting systems and counting methods. AI can be vital in providing solutions to problems faced by marginalized groups globally. It is of utmost important in international politics and diplomacy.

Thus, modern day politics is being assisted by AI, creating a link between the leader and public, promoting the campaigns through social media, where people are aware of each side story can mitigate the risks of corruption and.

promote transparency, diplomatic relations with other countries bridged by AI.

Besides, the rapid advancement of artificial intelligence has made it possible the revolutionized criminal justice system. AI has a profound impact on criminal justice system and is integrated into various stages of criminal justice process, from crime prevention, data analysing to sentencing. Through the applications of AI technologies, such as predictive policing algorithms, and advanced surveillance systems, authorities can analyze vast amount of data, identify patterns and allocate resources in real-time more effectively. For example, "China through its "Sharp Eyes" program Chinese Law enforcement agencies are watching videos, images, social media activity, online purchases, travel records and personal identity into a "police cloud." This integrated database enables authorities to keep track of criminals, lawbreakers, and terrorists. This has made China, world's leading super AI-powered surveillance state. Thus, technological revolution has made it possible the deployment of AI in criminal justice system to reduce human bias in law enforcement and leads to fairer judicial process.

Additionally, artificial intelligence in the financial services is doing wonders. It has enabled the personalized services and products. It has enabled the huge tasks to be done by machines in a few seconds. AI powered machines and robots have much greater capacity of storing the information and analyze it with the transparency and in a less processing time. Moreover, AI is also helpful in the fraud detection in the financial services. This helps managers to find early problems in the buy-sale cycle, before they reach dangerous levels. Decisions about loan are being made by software that can take variety of data into account before granting any loan. According to a report by PwC, AI technologies have the potential to automate up to 25% of tasks in the banking industry. This automation can improve the efficiency of financial operations, focusing on high value tasks. Thus, AI has brought robust changes in financial services.

Moreover, transportation represents an area where AI learning machines are producing the innovations. Automobile industries shifted to AI to make driving easy and enhance safety. Autonomous vehicles use the advanced technologies

features, which include driving guidance, and braking, lane-changing systems, cameras and sensors for preventing the road accidents, making the driving easy. GPS installed in vehicles are of utmost importance in accessing the locations and routes, enable the drivers to drive safely at their routes. Thus, advanced software enables vehicles to learn from experiences, adjust their guidance systems, as weather, driving or road conditions change.

On the other hand, AI has become increasingly integrated into daily lives. Such as AI's use in social media, it utilize AI algorithms for various purposes, as for content recommendation, advertisements, automated translation, spam detection.

In addition, facial recognition technology in smart phones uses AI algorithms to identify and authenticate individual. This provides security of phones. Moreover, AI has also been integrated in domestic chores. AI-powered devices like ovens, stove tops, robotic vacuums and smart appliances are making the lives easier, such as **Romba** and **Isobot** are recently being used in almost every home to do the automated deep cleaning of homes. AI has ~~of~~ profoundly automated about **39%** of domestic work within **10 years**. Thus, AI is enhancing its impacts in daily lives and simplifying tasks.

On a flip side, AI grows more sophisticated and widespread, the voices warning against the potential dangers of AI grow louder. First and foremost in the line is automation of jobs is a pressing concern, as technology is adopted in industries like marketing, manufacturing, services. It has replaced the human workforce leaving them unemployed. According to a report of McKinsey, by 2030, tasks that account for upto 30% of work hours in US economy could be automated. It will greatly impact the daily lives of people, as people will lose earning sources unless they are skilled, needed for technical roles. Thus, full-time jobs could be lost and be automated by AI, leaving the people unemployed.

Moreover, social manipulation also stands as a danger of AI. This fear has become reality, as there is widespread prejudices, widen gaps and increased biased data. Politicians rely on platforms to promote their view points, with one example being, Ferdinand Marcos, Jr. President, wielded a tiktok troll army to capture the votes of younger Filipinos during Philippines' 2022 election. As AI in social media producing a generating content, so there

§ Algorithms failure to filter harmful and inaccurate content, raising questions over the transparency and social media's ability to protect its users from misleading information. In the same manner, photos, videos, audio clips, replace the original figure with another in an existing picture or video, spreading the misinformation and propaganda. Thus, with this manipulation it becomes nearly impossible to distinguish between authentic and faulty news.

Furthermore, AI's potential threat is a privacy breaching and security of a person and organization, because of the complexity of algorithms used by AI. It has an unauthorized access to personal information creating the prominent ethical concerns, spreading hoaxes and accessing the sensitive information. This compromised personal data can lead to disastrous consequences such as identity theft, fraud or other violations. A prime example is China's use of facial recognition technology in offices, schools, and other venues. Besides, tracking person's movements, AI will be able to monitor person's activities, relationships, and political views. Therefore, these AI algorithms are disproportionately impact the individuals.

privacy and their personal data, creating the security threats by launching cyber attacks and hacking the data.

Besides, AI and deep learning models can be difficult to understand, even for those that work directly for technology. This is a complex process - leads to the concerns of Transparency and accountability - that how AI comes to its conclusion, creating a lack of explanation for what data AI algorithm use. AI decisions also lack the accountability, as for automated works concerns raise that to whom it should be held accountable. Thus, these concerns have given rise to the use of AI's transparency, accountability and explanation.

As is too often the case, technological advancements have been harnessed for the purpose of warfare. Countries are investing in AI-fueled autonomous weapons. There is continuous arms race in the world that is powered by AI. This inevitable - global arms race will lead to the technological trajectory. Major concern in this is that AI powered weapons will locate and destroy the targets on their own while abiding few -

regulations. Dangers become amplified when weapons fall into wrong hands. As, Hackers have mastered the various types of cyberattacks, so, it's not hard to imagine a malicious actor infiltrating autonomous weapons. Therefore, this arms race will end up on disastrous implications, pose major risks to the civilians on the ground.

Also, AI's increasing use in daily lives have raised serious ethical concerns when it comes to content creation, entertainment industry misinformation and its use in military. The unethical use of Deepfake in creating a misleading content is having a serious implications in the society, promoting biasness and hate-speeches. Violation of data privacy of users is another ethical concern associated with generative AI. Also, AI based decisions in health care, in criminal justice system, in automation of works in industries or in services raises a question over its accountability and ethics that what prompts the AI to make such decisions which promote the deep seated societal biasness and toxicity that AI unleash is unimaginable. Consequently, AI use in various sectors raises questions of its accuracy.

and data breaches, and quick, mistaken decisions in critical areas.

Given that AI technologies are playing the game of double edge sword, having both the positive as well as negative implications. Yet, there are certain steps that can be taken to make AI's use responsible. First and foremost is a international consensus. It's crucial for the nations and a need of hour, to come together and establish the quick actions that can be taken to mitigate the risks of AI. An international consensus like the climate consensus ~~can be~~ is required where nations collaboratively set the common guidelines, regulations and ethical frameworks. As in April 2021, European Commission - proposed the first regulatory framework for AI. Such cooperations and ~~frameworks~~ ^{work} can help to address the concerns such as the responsible development and deployment of AI, ensuring its alignment with human rights and values. This, by fostering collaboration, information sharing, and transparency countries can collectively navigate the challenges and maximizes the benefits of AI.

Similarly, when it comes to technology as transformative as AI, it's important that it should be internationally recognized. It will develop a common understanding among all. Not only the state actors, but also the non-state actors should come forward and establish a common goal, understanding, regulations and standards regarding AI. This step would ensure that there is a unified approach to manage the risks associated with AI. **AI safety summit 2023 as a start of critical global conversation** can be taken into consideration in this regard. As it was attended by world leaders, business executives, researchers, tech CEOs **signed the Bletchley Declaration**, aimed at a shared understanding of risks posed by AI frontier. Therefore, a unified approach ^{will} promote the responsible development practices and together, can navigate this evolving landscape of AI.

Furthermore, with the fast-paced advancements of AI, it is essential to form them at International, Regional and Central Level. These organizations will establish guidelines, standards, regulations that ensure the ethical use of AI. Moreover, these organizations can bring together experts, policymakers,

and stakeholders from different countries and regions on a common platform to address the common challenges. By collaborating and sharing knowledge, they can create the framework that could be applied at global and regional levels to minimize the possible risks of AI, and ^{ensures} ~~ensure~~ the member countries comply with the proposed policies. In a nutshell, through these coordinated efforts, the organization could ensure that AI is being used responsibly.

Additionally, education and awareness in this matter plays a crucial role in today's advancing technological landscape. By providing accessible and comprehensive information about the potential risks of AI, conducting the campaigns at schools or public places, and by spreading the information through the advertisements, individuals can be informed and can take the informed decisions, navigate the digital world more effectively. Therefore, it is important to raise awareness about the issues such as algorithm bias, privacy concerns, and potential job displacements, so that the people can protect their privacy, well-being and adopt the skills to use in fastest changing employment fields.

By amplifying human intelligence, AI may cause new Renaissance, perhaps a new phase of enlightenment. Artificial Intelligence, a technological upheaval with the potential to change the society, though comes with great benefits to revolutionize the world and change the world order, but, it has also its long-term negative consequences. However, it is important to remember that despite its risks, there is still a ray of hope for the world. By implementing the robust ethical frameworks, prioritizing transparency, world can shape a future where AI will be used responsibly, ethically and for collective good.

Link the attention catcher properly with the following lines

Work on improving sentence structure

Do not add unnecessary verbosity

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