

Hello Maam Mashal! I hope you are healthy and enjoying the day. Last week I received a comment that avoid the rhetoric style of writing and work on clarity. I have tried my best to avoid these. Kindly check this Essay in keeping view of my weaknesses. and evaluate that do I have improved.

Date: _____

~ Mankind faces the Challenge of using Artificial Intelligence Responsibly ~

Outline:

(1) Introduction

Artificial technology (AI) is the most advanced form of technology which has many advantages. However, it poses some serious challenges to mankind. The reasons of challenges can be counted as inappropriate patterns of usage and digital illiteracy. These issues can be resolved by proactive and stringent legislation and digital education.

(Thesis Statement)

(2) The emerging technology of AI emerges many challenges of using AI in a proper manner. (Crunch paragraph)

(3) The main concerns of using AI responsibly

(a) The negative externalities on non-AI adopters imposed by A.I front runners.

Date:

- (b) The tendencies of AI to discriminate gender, race, and cultures.
- (c) The protection of and handling of large amount of data.
- (d) The imminent threat of losing jobs due to automation.
- (e) The widening gap between ^{the} North and South in political and economic domain due to usage of AI.
- (f) The unethical usage of AI in academics, surveillance and espionage.

(4) At this emerging stage ^{of AI technology}, world faces many impacts:

- (a) The monopolization of markets by big companies who are using A.I
- (b) The surge of unemployment due to automation through AI
- (c) The negative consequences of using A.I on environment
- (d) The marginalization of female gender due to patriarchal machine learning
- (e) The political polarization, election rigging and technological race between countries, the lethal impacts of AI.

Date: _____

(5) The possible way forwards to mitigate the challenges of using AI responsibly.

(a) The development of legal framework to ensure privacy of users and transparency and accountability of AI.

(b) The revision of AI algorithms to make it unbiased towards gender, race and ethnicity.

(c) The transfer of AI technology from developed countries to developing countries to ensure equal growth of AI in the world.

(d) The assistance to unemployed labour due automation by relocating them into other sectors of industries.

(6) Conclusion

“Building advanced AI is like launching a rocket. The first challenge is to maximize acceleration, but once it starts picking up speed, you also need to focus on steering.”
(Jaar Tallinn)

Date:

The 20th century witnessed industrial boom and 21st century is witnessing technological boom. In this technological revolution Artificial Intelligence is a prominent development.

The world is witnessing and enjoying the dividend of AI. For example there are self-driving cars, trading assistance and many more advantages of AI.

However, scientist and people are sceptical regarding its "challenges of using responsibly." Stephen Hawking says "The development of full AI could spell the end of human race".

This emerging technology has many pros, but has cons as well. The disadvantages or challenges dominate in the field of privacy, transparency, inclusiveness, fairness, safety and accountability.

These are challenges of AI to use it responsibly. These challenges give birth to many concerns, such as negative externalities on AI nonadopters, the tendencies of AI to discriminate gender, race, and culture, the protection and handling of large amount of data, threat to lose jobs through automation

Date: _____

, the widening gap between the North and the South in economic and political domains, the unethical use of AI in academics, surveillance and espionage. The above mentioned concerns are serious and have great impact on individuals, societies and states. As Stephen Hawking pointed ^{out the} grave repercussions on societies and human race, his prediction is proving to be true. The AI has started to impact the world. The AI advanced countries have started to monopolize the markets, employers are chipping out employees during automation transition, the AI training programmes are affecting environment, the patriarchal machine learning is marginalizing female gender and elections are being rigged. This picture of AI, which is threatening gives scientists two options. The first one is to abandon AI and eliminate ^{it} from our lives. The second option is to embrace AI and strive to find solutions to face the challenges of using AI. The later option is more practical because AI advantages weigh ^{than disadvantage} more and if challenges addressed it is asset for humanity. The possible solutions to AI challenges are following: the development of legal

Date:

framework which ensures privacy, transparency and accountability of AI, revision of AI algorithms to make it unbiased against gender, the transfer of AI technology from developed to underdeveloping countries for equitable growth and dividends, and assistance to unemployed labour. These actions will mitigate the impacts of AI and help to use AI responsibly. As AI is ^{the} most advanced form of technology which has many advantages. However, it poses many challenges to mankind. The reasons of challenges are inappropriate usage of AI. These issues can be resolved by proactive and stringent legislation and digital literacy.

The emerging technology, AI, poses many challenges of using AI responsibly. ~~The~~ Microsoft has adopted a standard which consists 6 principles; the privacy, safety, transparency, inclusiveness, fairness and accountability. The above mentioned principles are prerequisite for using AI responsibly. Any kind

Date: _____

of breach in these means the challenge to appropriate use of AI. The breach of these ~~challenged~~ principles impose grave threats.

As the AI is emerging, the negligence in the principle is evident. For example, in 2020 "the CapitalOne" company leaked 100 million people data which is concern to their privacy and safety.

Thus, the laid down principles are neglected and creating non conducive environment for using AI responsibly.

The trajectories and patterns of using AI demonstrates that it has many elements of concerns. The use of AI has many externalities on AI non-adopters which are imposed by AI front runners.

The actors in AI adopters can be divided into 4 categories, i.e Front runners (completely adopts AI), Follower (try to catch up with front runners in AI) watcher (which wish to adopt technology but have not stepped in) and the last non adopters (who are not interested and unwilling to acquire AI). In this categorization front-runners will make the most of ^{the} technology. The MCKinsey, the institute of R&D in AI, ~~is~~ argues

Date:

that AI front runner cash flow will increase 120% by 2030, and the non-adopter cash flow will decline 20% by 2030. This study demonstrates that AI non-adopters are not going to have equal opportunities. The inequality affects socio-economic fabric of societies. The adopters will be more prosperous than non-adopters. In nutshell, the adopters have opportunities to harness the fruits of AI and on the other side AI-nonadopters are about to face negative externalities.

The AI has potential to discriminate between the genders, races, and cultures. The AI works on "AI deep machine learning" which is coded by individuals which belongs to male gender, anglo-saxon race and western culture. As AI is driven by codes means driven by coders and their biases and prejudices. This claim changed into fact by a study and subsequent report of UNESCO on "the effect of AI on working of women" in 2012. This report concluded that whenever the high-paid jobs are posted on Facebook, the AI shows advertisement more to male profiles than female profiles. This is complete discrimination.

Date: _____

against women according to report. Thus, ~~the~~ the AI has inclinations to discrimination against race, gender and cultures.

After discrimination, the AI poses concern for handling a large amount of data. In this 21st century humans are digitalized and leaving a large amount of ^{personal} data as digital footprints. The leakage of personal data may make people vulnerable and exposed to threats. As mentioned earlier, in 2020, the Capital One, an artificial intelligence based company, leaked 100 million people data. This breach of privacy raises many concern of future use of AI. In conclusion, the AI has access to a large amount of data which is difficult for AI infrastructure to handle ^{and} make ^{the} users to concern about their privacy and safety.

The challenge to use AI responsibly is targeting labour force. The AI allows industries to transform from manual to automation. The automation needs less labour, so employers may chipp off ^{employees} from jobs. According to PwC research, 72%.

showed concern about their job loss. The loss of job will affect many households as many jobs in the industries are have abilities to be transformed into automation. This may unleash unemployment, poverty, mental stress and social insecurities. Consequently, the use of AI is imminent threat to job loss by automation.

The AI use can ^{more} widen the gap between the global North and ^{the} global South. While the Global North is group of well developed and prosperous countries. These countries have capital to invest more in AI. On the other hand, the Global South is group of underdeveloped and economically backward countries. These countries have less capital to invest in AI development and the technology adoption.

As already mentioned, the front runners have edge to exploit more the non-AI adopter. As a result, the Global North would exploit more to global South and the politico-socio-economic groove will wide more.

Date: _____

There are change chances of unethical use of AI in academics, surveillances, and espionage. For these actions AI is sophisticated tool. As it learns intelligence ^{from} supervised and unsupervised methods. The both methods feeds AI with a large amount of data. The large amount of data enables AI to write research articles, newsarticles and thesis. As a result, academic field struggles with pegerisum and fraud. Not only the academic field, but also in surveillance and espionage ^{AI was} used unethically. According to a report "Surveillance, Security; AI as technological Acceptance" by Young Jun Park, AI can disturb encryption, firewalls, and authentication. Therefore, AI is used for forging academic field, surveillance and espionage.

These are major concerns or challenges that are posed by use of AI. However, AI has started to impact the individuals, organizations and states. The ~~fr~~ big companies have started to monopolizes the markets by using AI. According to Investipodia article named "Adpot, capture and kill", the big companies are adopting the AI

Date:

technology, capturing the markets and killing the small companies.

By doing this Facebook and Google own 90% of share in technology.

The monopolization of the market kills the competition. The competition is major element of neoliberal economic system. If this economic system is disturbed, this will have grave impact on global political economy. Thus, AI is helping companies to monopolize the markets and they have successfully monopolize it.

The AI has increased the unemployment and further unemployment will increase. The AI is changing industries and transforming them from manual to automation.

According to McKinsey, due to automation 400 million people have lost jobs from 2014 to 2023.

At the one side it is helping the developed countries, where countries are short of labour such as Japan, where as countries like India, Pakistan and China where population is in great number. In these countries unemployment

Date: _____

unemployment will be a disasterous ^{automation} due to

In summation, AI is a tool that is causing people to ^{be} unemployed.

Everyone is familiar that the Earth is fighting with climate change. In this condition any stress to environment is a matter of worry.

In addition, AI is making environment issue more worse. According to

accounts of MIT review, the training of BERT, an AI model, produces CO_2 more than 5 cars. Furthermore,

the review highlights that the carbon emission is directly proportional to ~~envi~~ the size and complexity to AI model. In future, scientist will work

on more complex and advance model as XLNET. These model will produce/

emit more CO_2 . Thus, the AI and

Environment have close co-relation.

which will eventually harm environment.

As in the concern section of text discussed the likelihood of discriminationⁿ.

At this stage the impact of AI on gender is not immense but escalating.

The AI based systems are illustrating the patterns where structural marginalizationⁿ

Date: _____

is prevalent: The UNESCO report on "the effect of using AI on working women" demonstrate that AI based apps are hindering the upward growth of women. The AI suggests low paying jobs to females. This leads to structural violence against women, where women have to face socio-economic challenges. This action of AI may affect mental and physical health of women. One can conclude that AI is a discriminatory tool due to its patriarchal masters.

The effect of AI in political polarization, election rigging and propaganda is prevalent. The AI boosts the "search engine optimizations" as a result the internet users watch a certain kind of opinions, arguments and concepts in videos. This technique is used by politicians who use AI to streamline internet users in their favour and against their opponent. This leads to polarization in politics. The Pakistani politics is the best example of this. Furthermore, the AI can be used for election rigging. As President Putin is

Date: _____

blamed for rigging 2018 USA election. The intervention of AI in political domain is threat to democracy and political stability of world. In nutshell, the AI is being used for election rigging, political polarization.

The above mentioned and discussed impacts of AI can be mitigated by many ways which will help to maximize the advantages of AI and minimize the disadvantages. The AI can be regulated by stringent legislative framework as EU has promulgated General Data Protection Regulation. This legislative framework regulates privacy, transparency and accountability of AI in respect to data collection, and protection, and usage. Similar type of legislations will ~~will~~ come around the world will make AI use responsible. Thus, a stringent policy framework should be constituted by all countries to protect data misuse.

While discussing the impacts of AI on women, the conclusion was that AI is discriminating female gender. This issue can be addressed

Date:

through ~~retraining~~ ^{retraining} AI models. The retraining should be unbiased, non discriminatory. As the AI still an emerging technology it should be checked ^{at the} initial stage. If this pattern is not modified the deep learning of machine would be immensely advanced and to inhibit discrimination would be difficult. Therefore, the AI should be trained to respect all gender and provide equal opportunities to all genders.

The great challenges for AI is distribute it equitably as all the countries can ^{benefit} ~~benefit~~ ^{from} it equally.

The possible to this problem is transfer of the technology from the Global North to Global ~~North~~ South. This way the expansion of AI would be horizontal, not vertical, and dividends would be equal. The horizontal growth will enable all countries to develop AI. The dilemma of front-runner and AI non-adopter will start to fade away. Thus, the transfer of technology from North to South will help to eradicate the technological gap between the ^{fill} regions.

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Date: _____

The critics of use of AI argue that AI is surging the unemployment. This is proved to be a fact by many researches as mentioned earlier. The issue of unemployment can ^{be} dealt by exploring the impact of AI. At one side automation due to AI is eroding jobs, while at an other side, the technology of AI is generating many jobs in other sectors such as, construction and telecommunication. According McKinsey, ^{the} AI has potential to create 400 & 750 million jobs in other sectors and increase GDP of countries 14% and \$13 trillion monetary growth all around the world. Thus, assisting the labour to transform from one one sector to an other will resolve ^{the} unemployment issue.

Jaam Tillian has given right analogies, as he says, "Building Advance AI is like launching a rocket. The first challenge is to maximize the acceleration, but once it starts picking up speed, you also need to focus on steering. Likewise,

Date:

the discussion concludes the same. At this stage AI is emerging with concerns such as negative externalities on non AI-adopter, the imminent threat to losing jobs, the widening gap between the North and the South and so on. With concern the impacts are visible as well as, like the emission of CO₂ during AI training, the monopolization of markets by AI induced/equipped companies, and the marginalization of female genders.

These are challenges like that of rocket. When the steering of rocket is controlled the problem is resolved. Similarly, by Legislation on AI, transfer of the technology from the Global North to Global South and retraining AI model for unbiased processing are steering component. When all these are applied there is will controlled AI to ^{only} help humankind. The challenge to humankind to use AI responsibly can be summed as:

“The real problem is not machine thinks, but whether man do”

(B.F Skinner)