

The impact of Artificial Intelligence on society.
The dangers of unregulated AI technologies on society
Research Essay

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AI – Artificial Intelligence

RPA – Robotic Process Automation

DoS/DDoS – Denial-of-Service/Distributed Denial-of-Service

Introduction

Over the last decade, the Artificial Intelligence (AI) industry has evolved and influenced almost all industries. AI has evolved in such a way that it has incorporated with a vast field in today's world. It can range from assisting humans from simple tasks to a larger extent to which the human hands were nearly difficult or to be impossible to accomplish in a speculated time frame. The area of applications is ranging from Smartphones to Smart homes. Few of the common usage in the society are listed in below image (techvidvan).

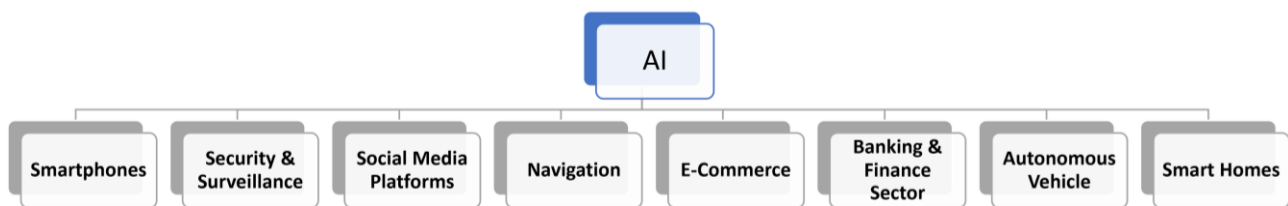


Figure 1: Common applications of AI in society

It is undeniable that the AI system have helped human to process many complex and tedious tasks in very effective manner. Moreover, the AI systems are helping the humankind beyond this simple tasks. For example, AI in Military (Eray Eliaçık, 2022), RPA, AI systems in Manufacturing industries and AI telemetry service for Satellite control (SpaceX – Implemented AI system to avoid Satellite collisions) are a few of them.

However, the unregulated AI systems can lead to devastating outcomes. It can be dangerous in many aspects to the society than helping the humankind. Therefore, it is necessary to regulate the use of the AI systems. The Artificial intelligence systems were built using various machine learning algorithms whose performance can only be improved by the repeated exposure to the corresponding data. So, to regulate the use of the AI system, the concerned authorities must put tight security and evaluation process before they released to the outside world to avoid future undesirable and ethical or legal issues and problems related to the security and privacy of the common people. There are beliefs that, the tight regulations may lead to the degraded innovation which can be evolved through the wide exposure of the broad data sets from outside world. It is always better to have few well regulated AI technologies than abundant unregulated systems which leads to the insecurities of the people in their privacy and security.

Effects of advancement in unregulated AI systems

There are positive and negative impact for the Artificial intelligence applications in the society. There are various applications which are well regulated and helpful to the society. For instance, Medical Imaging techniques, Speech recognition, AI based language translation system, image recognition system aid for blind people's navigations etc... are few of the positive effects in Human life, whereas there are many AI based applications which uses unregulated tools and techniques to gather information even without consent from the end users to develop and evolve their AI systems for various purposes which can be having adverse effect in long run in economy and markets. It may lead to unethical use of the data which is being captured and which possess uncertainty in the transparency of their applications among the society (UN Human-Rights - 2021). Furthermore, these unregulated AI technologies can lead to develop a fear in the society, which may have long term impact in terms of Behavioral, Cultural and Psychological issues. For example, the development of AI based autonomous weapons. It may help in few areas like military, whereas the same technologies in hands of undesirable people can leads to devastating outcome in case of a public outbreak as the form of threatens. This research majorly focused on portraying the dangers of using unregulated artificial intelligence systems in society. There are few areas in the AI system which needs to be well regulated and in this essay the necessity of these systems to be regulated is being discussed in detail.

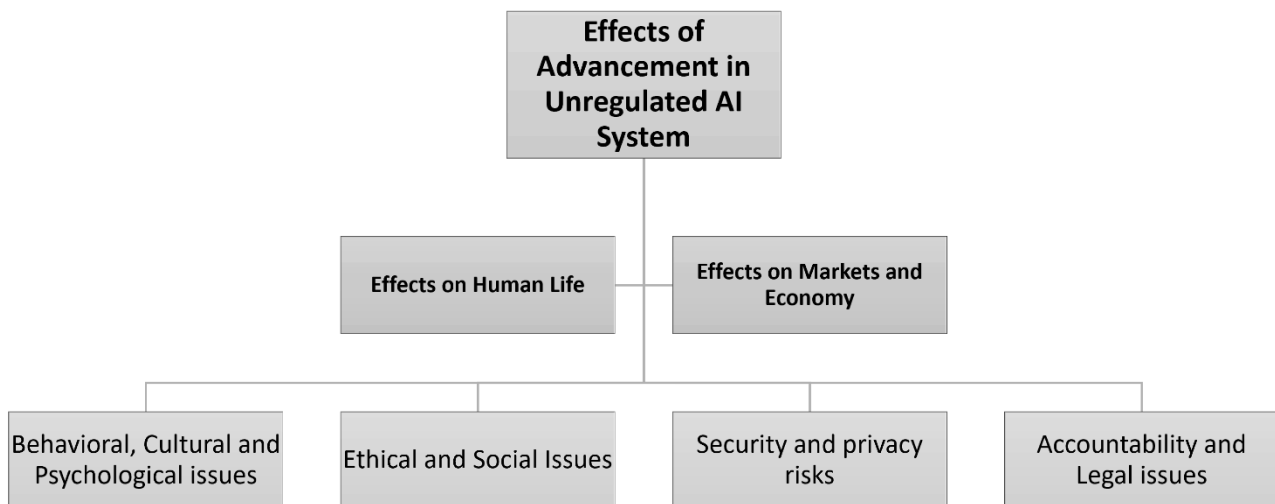


Figure 2: Areas of impact of AI advancements

When discussing about the disadvantages of the unregulated AI systems, it is necessary to consider the areas where it must be implemented (Daron Acemoğlu /23 Nov 2021). There are AI areas where it requires more intervention to regulate it for the ethical use of its real applications and avoid end user complaints and legal complications. As far as a society is being concerned there are few areas it needs good regulatory measures to be implemented. AI can be threat to many areas and which can lead to biased system due to many reasons. For example, safety and security of humans and

the environments which is having a prime concern among all these systems. Furthermore, enough consideration to be given to the areas where the AI applications breaches the ethics and human rights. Also, the new AI systems should never bring a barrier within the society such as socio-economic inequality. And there should be enough consideration while weaponizing using the AI systems.

The adverse effects of unregulated AI systems in society

This research essay argues that the current AI advancements are more likely to generate a lot of adverse social consequences, rather than the promised gains if it is not well regulated. It provides examples of issues in unregulated AI technologies in various fields like human safety, security, privacy, rights, inequality and discuss few advanced topics like cyber security and AI powered weapons and terrorisms. The following areas are evaluated in this research and discuss why all the AI systems should be regulated.

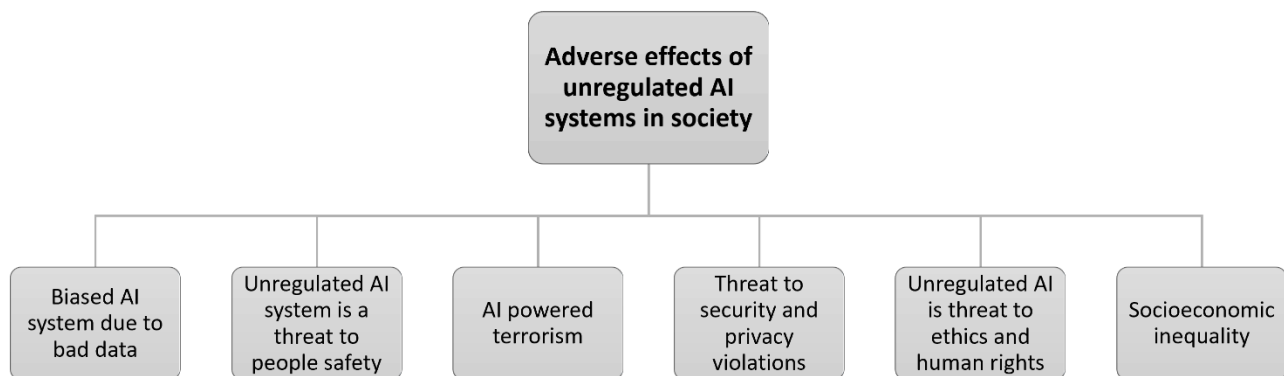


Figure 3: Various categories of the unregulated AI systems

Biased AI system due to bad data

Data bias in Artificial Intelligence (AI) or Machine Learning (ML) system is a type of error arises when the system is trained using datasets with over or underrepresented datasets or a humanly manipulated data. This kind of false trained system can give raise to injustice incase of AI application systems used in judiciary. There are other examples in the biased AI systems like Biased AI powered financial access systems and Unregulated AI Criminal Justice System (Asma Idder and Stephane Coulaux 2021, Ai in Criminal justice).

An Unregulated AI Recruitment System may lead to deny the opportunity to deserved candidates. Many companies nowadays use AI system to recruit right candidates for the vacancies. It is merely impossible to sit and go through each profile by the human resource team to identify the right candidate for the available vacancy at the organizations. By employing the AI based recruitment

system, the tedious task can be minimized and make the whole process simple and effective. What in case of an unregulated employment applications powered by the AI? Such as a manually tuned system to assess a particular category rather than analyzing the whole candidates and selecting them based on real merits. In such case the whole system loses its transparency.

A second example of biased AI system is Unregulated AI Based Financial Access System. There are lot of financial institutions used AI based applications integrated into their business, which may be used to help to identify the market and risk analysis. Using them in a right way will be an added advantage for any firms. Whereas if the applications integrated in their system were unregulated, then it can be a problem (James Langton, 2021). For example, for the finance institutions for analyzing the credit score of the applicants. Nowadays many institutions consider the personal information of the applicants to calculate the credit score rather than taking the financial background alone which should be the prime input for calculating the same as per the approved laws and regulations. It is unethical to capture and analyze the personal data of an individual without their prior consent.

Another important area of consideration is the Unregulated AI Criminal Justice System. This can be a dangerous situation that if the applications used in the AI based Justice system are unregulated. In a perfectly regulated AI based Justice system, everyone can expect a Fair Trials whereas an unregulated system tends to bias based on the manipulated data presented to the analytics system. The wrong judgement presented to the biased system leads to adverse effect in final judgement results and may cause the criminals to become free from crime where the innocents may be charged sentences.

To avoid biasing in the AI powered systems, tight regulatory check must be implemented and ensure only approved algorithms used in the applications. Also tighten the security to avoid any human intervention to manipulate the input data can help to avoid biasing which in turn led to get the accurate results from the AI based systems.

Unregulated AI system is a threat to people safety

AI can still be considered in an infant stage when considering the applications used in humanoid robots in warfare and unregulated autonomous weapons. The AI systems were not fully functional as equal as human brain. It can analyze the environment based on the previously trained data whereas when deploy such weapons in totally indifferent situations, it may lead to undesirable situations and may cause the lose of innocent peoples. AI based decisions on to whole to spare and to whom to attack must be gone through a human brain than an AI system. Even the small error can lead to devastating situations. Another interesting fact to consider is the situation where an autonomous weapon achieving the AI singularity (Meir Finkel, 2020, AI singularity), it can be an unimaginable situation where the machine will take over the human raise. This is because, if the

weapons systems were autonomized using AI, it may not be controlled and coordinated properly by humans.

Another area of risk factor is the AI based devices incorporated to aid humans. There are many applications which are in contact with the physical human body to control various autonomous activities like pacemaker, insulin pump etc. There is always a risk of getting them hacked and the persons may get harmed remotely without any trace of evidence. Which is one of the major areas in AI based cyber security which needs more sophisticated regulations in security complains to make sure the security and isolation of such applications from outside world.

AI powered terrorism

The malicious use of artificial intelligence in terrorist activity cannot be undeniable. The advancement of the AI systems can enhance the cyber capabilities of terrorist activities. Cyber-attacks can be in any form like DDoS, Malware, Ransomware, etc. There are chances of AI based physical attack such as autonomous vehicles being hacked and controlled by someone from outside the vehicle, Killer Drones (Jacob Ware - 2019) with facial recognition can be used to kill peoples, and genetically targeted bioweapons also possible. These days AI powered applications were used to support the terrorist activities in many aspects like funding terrorisms through audio deepfakes and crypto trading. The deepfakes and other manipulated information are being used in spreading the malicious propaganda of the terrorist activities. Moreover, these applications were used to bypass the surveillance systems and creation of the fake identities and human impersonation on social network platforms. Detailed lists are illustrated in the below image (UNICRI, 2021).

THE DANGERS OF USING UNREGULATED AI TECHNOLOGIES ON SOCIETY

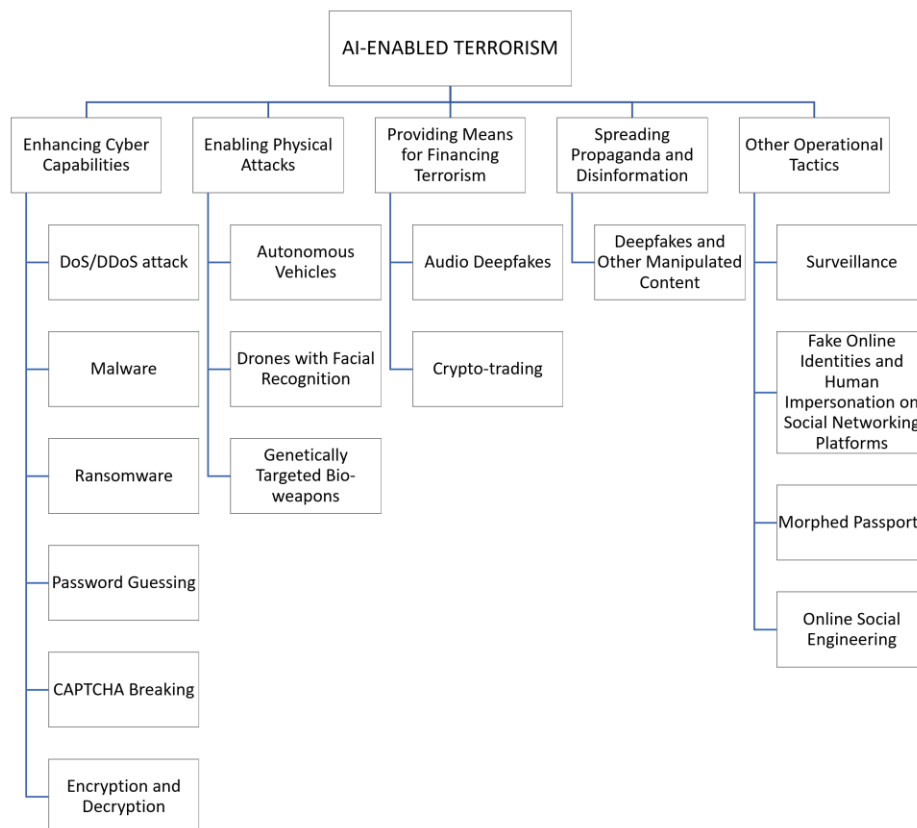


Figure 4: AI-enabled terrorism

Threat to security and Privacy violations

There are many situations in which an AI based system fail to notice the intruder activities like a malware attack. Nowadays a lot of countries are putting enormous amount of money and manpower to integrate AI systems into their government security systems and weapon controls. Imagine what will be the outcome, if there is a situation arises in which the government's sensitive data system is being hacked and the malware were able to integrate with the AI system which controls them. If those malwares can transfer the sensitive data, which have the decision power to threaten the lives of the citizens, to an outsider or the enemy; it can lead to war between countries (UNICRI, 2021)..

Various companies nowadays use AI based applications to gather and analyze customer data. If we think in a wider range, an application can be developed to capture the personal information including their speech, location, devices, and even the information contained in their smartphones causing serious security violations. This becomes privacy violation when a third person come to know about the sensitive or private/sensitive information of other without their consent (Ashdane Beckford). Cyber laws must be tightened to ensure data privacy of the individuals. There should be a way or other for the customer to opt out the sensitive data is being processed or analyzed at any circumstances if they deny doing so.

Unregulated AI is threat to ethics and human rights

AI is helping humankind in vast area of day-to-day life. It has helped the scientists around the world to resolve a lot of humanly impossible tasks. However, AI can lead to catastrophic effects as well if they were used without having prior consents and can be a breach to the human rights (accessnow.org). It can be unethical to collect and process personal information of any individual without prior consent such as biometric information (UN Human-Rights - 2021). There must be an option in every AI based application where the end users can opt-out the gathering of personal information via their applications and deny processing them for any other purpose. If a company use these data and if there is no enforcement of law and order to prevent these crimes, more and more companies come forward and develop such applications which leads the users a feeling that the application is insecure and there exist a feeling of insecurity.

Socioeconomic inequality

Even though AI have helped in many ways there are some impacts when considering the socioeconomic inequality (AI100) 2021), it brings among the society. The automation has evolved over the past and it is kept on growing. Whenever there is a revolutionary discovery comes in to play which aids the industry to grow drastically up, we see a parallel growth in unemployment as well, which leads to increase in sudden wealth in upper class and poverty or degraded incomes in in lower- or middle-class society. This may be because majority of the people are not able to cop up with the drastic change or unable to upskill with the market. This will slowly develop a socioeconomic inequality among them. This trend is clearly visible in case of growing AI based systems in current situation as well. The excessive focus on human like AI system can leads to decrease wages of many people in the society while upskilled AI workers could somehow help to push their wages up.

Conclusion

This research puts light on one point that the unregulated AI systems are harmful to the society. There are various aspects of issues which can arise due to the use of unregulated AI systems. Most of them which we face due to AI are due to the lack of regulations over the use of such algorithms embedded in those applications and lack of restrictions of data privacy. Manipulatable data feed can cause the bias in AI based system. Ai systems were still in developing stage, so it is not desirable to have too much integration in national security systems without having thorough testing before implementation. A negligible loophole in the AI based system can even wipe out an entire nation in case of AI based weaponry system. Autonomous weapons in hands of terrorists have further adverse effect, which may lead to mass killings of innocent peoples. It is always better to have a line of control for any company to gather information of end users and use them for their further analysis. If not, this can cause the violation of privacy and human rights which in turn cause the people to feel

insecurity. AI innovations were undeniable in upcoming era, but without proper regulations by each government, on the AI algorithms used to develop the applications, it can be a Sword of Damocles hanging over the head of everyone. Along with government the companies also should thoroughly check the breach in each development stages to avoid any such unregulated AI usage. Point to remember here is that it is not a one-day process to do and conclude, but it should be continuously monitored and improved over the period and required security implementation to be applied whenever and wherever it is required.

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