

Impact of Artificial Intelligence on Human Society and Its Ethics

Kiran Yashwant Mhapsekar

Student, Department of MCA

Late Bhausaheb Hiray S. S. Trust's Institute of Computer Application, Mumbai, India

Abstract: *In a world that is becoming more technology centric, it is only appropriate to consider the consequence of creating various forms of life from that technology. One of such technology that is changing the way the world operates is Artificial Intelligence (AI). This article will first examine what AI is, discuss its impact on human society, social, and economic then propose a set of principles for AI ethics. Modern AI, however, has a huge impact on how we do things and also the ways we relate to one another. Facing this challenge, new principles of AI ethics must be considered and developed to provide guidelines for the AI technology to observe so that the world will be gain by the progress of this new intelligence.*

Keywords: Artificial Intelligence, Impacts, Ethics.

I. INTRODUCTION

There are different definitions of Artificial intelligence; some see it because the created technology that enables computers and machines to function intelligently. Some see it because the machine that replaces human labour to figure for men a more practical and speedier result. Others see it as “a system” with the power to properly interpret external data, to find out from such data, and to use those learnings to realize specific goals and tasks through flexible adaptation. For all the various definitions, the common understanding of AI is that it's related to machines and computers to assist humankind solve problems and facilitate working processes. In short, it's an intelligence designed by humans and demonstrated by machines. The term AI is employed to explain these functions of human-made tool that emulates the “cognitive” abilities of the natural intelligence of human minds.

II. PROBLEM DEFINATION

Due to the widespread deployment of AI technology (in areas like healthcare, financial services, manufacturing, agriculture, Smart Countries or Smart Towns, etc.) that has already initiated the transformation of our societies, ethical, legal and social challenges around Their use has sparked a collective debate on their potential positive and negative impacts the negative impact of AI, and if we are going to allow these systems to indeed work like human roles. Therefore, this research paper aims to dissect AI, its impact on human society and consequently the ethical considerations concerning its large deployment.

III. RESEARCH METHODOLOGY

In this study, we explore the literature on how artificial intelligence impacts society and its transformation. In recent years, artificial intelligence has penetrated a wide range of fields. We have gathered literature from various disciplines where AI is applied to cover various societal aspects. There are a number of areas in which these technologies are used, including healthcare, automotives, commerce, governance, defence, entertainment, computation, and sports. These articles are retrieved from peer-reviewed sources based on the keywords suggesting the role of AI, forecasting & assessment of impact, behavioural & ecological aspects of AI, and AI's relation to employment. Various reports from governments or their agencies are also retrieved and reviewed to put forward their opinions, studies, and measures to strengthen their position in AI-led futures.

IV. DO HUMANS REALLY NEEDS ARTIFICIAL INTELLIGENCE?

Is Artificial intelligence really needed in human society? It depends. If human choose for a faster and effective way to complete their work and to work constantly without taking a break, yes, it is. However, if humankind is satisfied with a

natural way of living without excessive desires to overcome the order of nature, it is not. History tells us that human is always looking for something faster, easier, more effective to finish the tasks.

Therefore, the force for further development motivates humankind to look far to a new and better way of doing things. Humankind as the human wise discovered that tools could facilitate many hardships for daily human livings and through tools they invented, human could complete the work better, faster, smarter and more effectively.

The invention to create new things becomes the motive of human progress. We enjoy a much easier and more easy life today all because of the contribution of technology.

The human society has been using these tools since the beginning of civilization, and human progress depends on it. The human kind living in current century did not have to work as hard as their forefathers in previous times because they have new machines to work for them.

It is all good and should be all right for this artificial intelligence but a warning came as the human-technology kept developing that that human might step into a world in which we are creating a super human with the development of genetic technology.

V. THE IMPACT OF AI ON HUMAN SOCIETY

5.1 Negative Impact



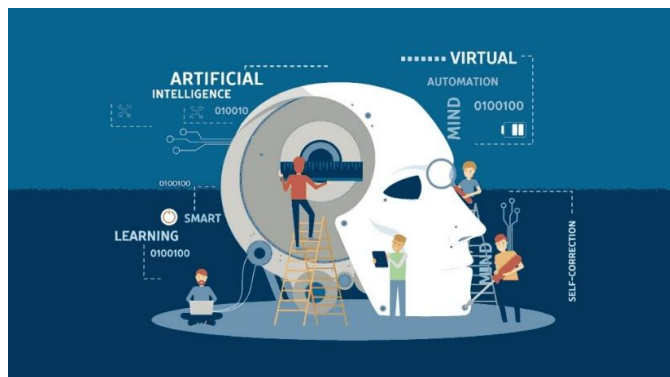
Questions are asked: With the progressive development of AI, human labor will not be needed as everything will be done mechanically. Will humans become lazier and eventually degrade to the stage that we return to our primitive kind of being? the method of evolution takes eons to develop, so we'll not notice the backsliding of humankind. However how about if the AI becomes so powerful that it can program itself to be guilty and disobey the order given by its master, the humankind?

Let us see the negative impact the AI will wear human society:

1. A large social change that disrupts the way we sleep in the human community will occur. Humankind must be industrious to create their living, but with the service of AI, we will just program the machine to try to to a thing for us without even lifting a tool. Human closeness are gradually diminishing as AI will replace the requirement for people to fulfill face to face for idea exchange. AI will sub between people because the personal gathering will not be needed for communication
2. Unemployment is that the next because many works are replaced by machinery. Today, many automobile assembly lines are full of machineries and robots, forcing traditional workers to lose their jobs. Even in supermarket, the shop clerks won't be needed anymore because the digital device can take over human labour.
3. Wealth inequality are created because the investors of AI will take up the key share of the earnings. The gap between the rich and also the poor are going to be widened. The so-called "M" shape wealth distribution are going to be more obvious
4. New issues surface not only in a very very social sense but also in AI itself because the AI being trained and learned the thanks to operate the given task can eventually initiate to the stage that human has no control, thus creating un-anticipated problems and consequences.
5. The human masters who create AI may invent something that's racial bias or egocentrically oriented to harm certain people or things. for example, the UN has voted to limit the spread of nucleus power in fear of its indiscriminate use to destroying humankind or targeting on certain races or region to attain the goal of

domination. AI is feasible to focus on certain race or some programmed objects to accomplish the command of destruction by the programmers, thus creating world disaster.

5.2 Positive Impact



There are, however, many positive impacts on humans further, especially within the field of healthcare. AI gives computers the capacity to be told, reason, and apply logic. Scientists, medical researchers, clinicians, mathematicians, and engineers, when working together, can design an AI that's aimed toward diagnosing and coverings, thus offering reliable and safe systems of health-care delivery. As health professors and medical researchers endeavour to search out new and efficient ways of treating diseases, not only the computing device can assist in analysing, robotic systems can even be created to try and do some delicate medical procedures with precision.

5.2.1 Fast and accurate diagnostics



IBM's Watson computer has been wont to diagnose with the fascinating result. Loading the information to the pc will instantly get AI's diagnosis. AI also can provide various ways of treatment for physicians to contemplate. The procedure are a few things like this: To load the digital results of physical examination to the pc which will consider all possibilities and automatically diagnose whether or not the patient suffers from some deficiencies and illness and even suggest various sorts of available treatment.

5.2.2 Socially Therapeutic Robots



Pets are recommended to senior citizens to ease their tension and reduce blood pressure, anxiety, loneliness, and increase social interaction. Now cyborgs have been suggested to accompany those lonely old folks, even to help do some house chores. Therapeutic robots and the socially assistive robot technology help improve the quality of life for seniors and physically challenged.

5.2.3 Reduce Errors Related to Human Things



Human error at workforce is inevitable and often costly, the greater the number of fatigue, the upper the prospect of errors occurring. AI technology, however, doesn't suffer from fatigue or emotional distraction. It saves errors and should accomplish the duty faster and more accurately.

5.2.4 Artificial Intelligence-Based Surgical Contribution



AI-based surgical procedures are available for people to make your mind up on. Although this AI still needs to be operated by the health professionals, it can complete the work with less damage to the body. The sculptor surgical system, a robotic technology allowing surgeons to perform minimally invasive procedures, is accessible in most of the hospitals now. These systems enable a degree of precision and accuracy far greater than the procedures done manually. The less invasive the surgery, the less trauma it'll occur and fewer blood loss, less anxiety of the patients.

5.2.5 Improved Radiology



The first CT scanners were introduced in 1971. the primary resonance imaging (MRI) scan of the physique passed in 1977. By the first 2000s, cardiac MRI, body MRI, and fetal imaging, became routine. The search continues for latest algorithms to detect specific diseases further on analyse the results of scans. All these are the contribution of the technology of Artificial Intelligence.

5.2.6 Online Virtual Presence



The online virtual presence systems can enable a distant diagnosis of the diseases. The patient doesn't have to leave their bed but employing a distant presence robot, doctors can check the patients without actually being there. Health specialists can move around and interact almost as effectively as if they were present. this allows specialists to assist patients who aren't able to travel.

VI. WHERE IT IS USED?

Besides, up-to-dated AI is breaking into medical industry too by giving assistance to the doctors to diagnose, finding the sources of diseases, suggesting differ ways of treatment performing surgery and also predicting if the sickness is life-threatening.

A recent study by surgeons at the Children's National Medical Centre (Washington) successfully demonstrated surgery with an autonomous robot. The team supervised the robot to perform soft-tissue surgery, stitch together a pig's bowel, and also the robot finished the duty better than a personality's surgeon, the team claimed.

It demonstrates by robotically-assisted surgery can overcome the restrictions of pre-existing minimally-invasive surgical procedures and to boost the capacities of surgeons performing open surgery.



Above all, we see the examples of AI including autonomous vehicles such as drones and self-driving cars, medical diagnosis, creating art, playing games such as Chess or Go, search engines such as Google search, image recognition in photographs, spam filtering, predicting flight delays...etc.



All these have made human life much easier that we are so used to them and take them for granted. Artificial intelligence has become indispensable, although it is not absolutely needed without it our world will be in chaos in many ways today. Along with the faster development of cybernetic technology in recent years, AI has been seen almost in all our life circles, and some of that may no longer be regarded as AI because it is so common in daily life. Face unlock like face id in apple phones, image processing/HDR in smartphones, google assistant, recommendations in apps like Facebook, Twitter, etc and in advertisements in Amazon, Flipkart, etc.



Self-driving cars like tesla, creating art like DALL-E (stylized as DALL·E) is an artificial intelligence program developed by OpenAI that creates digital images from textual descriptions, search engine like Google, image recognition like google lens, spam filtering like Truecaller blocking spam calls and unwanted messages, flight delays by predictions.

VII. ETHICS

This topical field of study is new and understudied hence there is limited information in the internet. The social and ethical challenges of AI weighs heavily upon multifaceted fields, such as international humanitarian law, data protection, As well as ethical enquiries, such as governance, ethical research, fairness, or transparency. Ethical and social issues both have huge roles to play in the society as they impact us in both individual and collective levels.

Ethical issues consist of problems caused by individuals that result in negative impact on the individual or the society while social issues are problems that greatly influence large populations, positively or negatively.

Whilst the two are similar as they both affect individuals and sometimes the society, they are different. Unlike ethical issues, social issues affect the society as a whole, are complex and difficult to control and cannot be solved with sanctions/ incentives.

Ethical issues in AI design and implementation and social impact are interconnected and with all the technological advancements, the society will face further challenges in directing and investing in technologies that benefit humanity instead of destroying it or intruding on basic human rights of privacy and freedom of access to information.

Social impact involves those who the technology will directly or indirectly impact our life from individual perspective, community and the society at large.

The rapid development and evolution of AI technologies, while unleashing opportunities for business and communities across the world, have prompted a number of important deliberations.

Civil society is demanding more accountability in the way AI technologies are used, trying to find a solution to the legal and ethical issues that will be resulted from the growing consolidation of AI in people's daily lives (Ministry for Europe and Foreign Affairs, 2020)²⁷. In spite of the positive impact that these emerging technologies bear on humanity, they increasingly seem to be characterized by vulnerabilities that hinder accuracy, security, accountability and many others.

VIII. ETHICAL ISSUES

Tech giants like Alphabet, Amazon, Facebook, IBM and Microsoft – in addition as individuals like physicist and Elon Musk – believe that now could be the correct time to speak about the nearly boundless landscape of AI. In many ways, this can be even as much a replacement frontier for ethics and risk assessment because it is for emerging technology.

8.1. Unemployment. What happens after the end of jobs?

The hierarchy of labour is worried primarily with automation. As we've invented ways to automate jobs, we could create room for people to convey more complex roles, moving from the physical work that dominated the pre-industrial globe to the cognitive labour that characterizes strategic and administrative add our globalized society.

Look at trucking: it currently employs voluminous individuals within the us alone. what is going to happen to them if the self-driving trucks promised by Tesla's Elon Musk become widely available within the next decade? But on the opposite hand, if we consider the lower risk of accidents, self-driving trucks appear to be an ethical choice. the identical scenario could happen to office workers, likewise on the bulk of the workforce in developed countries.

8.2. Inequality. How do we distribute the wealth created by machines?

Our financial set-up relies on compensation for contribution to the economy, often assessed using an hourly wage. the bulk of companies are still addicted to hourly work when it involves products and services. But by using computing, an organization can drastically hamper on wishing on the human workforce, and this suggests that revenues will move to fewer people. Consequently, individuals who have ownership in AI-driven companies will make all the cash.

We are already seeing a widening wealth gap, where start-up founders take home a large portion of the economic surplus they create. In 2014, roughly the same revenues were generated by the three biggest companies in Detroit and the three biggest companies in Silicon Valley ... only in Silicon Valley there were 10 times fewer employees.

If we're truly imagining a post-work society, how do we structure a fair post-labour economy?

8.3 Humanity. How do machines affect our behavior and interaction?

Artificially intelligent bots are getting better and better at modelling human conversation and relationships. In 2015, a bot named Eugene Goostman won the Turing Challenge for the primary time. during this challenge, human raters used text input to talk with an unknown entity, then guessed whether or not they had been chatting with somebody's or a machine. Eugene Goostman fooled quite 1/2 the human raters into thinking that they had been reproof somebody's being. This milestone is barely the beginning of an age where we are going to frequently interact with machines as if they're humans; whether in customer service or sales. While humans are limited within the attention and kindness that they will expend on another person, artificial bots can channel virtually unlimited resources into building relationships.

Even though not many people are responsive to this, we are already witnesses to how machines can trigger the reward centres within the human brain. Just have a look at click-bait headlines and video games. These headlines are often optimized with A/B testing, a rudimentary type of algorithmic optimization for content to capture our attention. This and other methods are accustomed make numerous video and mobile games become addictive. Tech addiction is that the new frontier of human dependency.

On the opposite hand, maybe we will think about a special use for software, which has already become effective at directing human attention and triggering certain actions. When used right, this might evolve into a chance to nudge society towards more beneficial behavior. However, within the wrong hands it could prove detrimental.

8.4 Artificial stupidity. How can we guard against mistakes?

Intelligence comes from learning things , whether you're human or machine. Systems usually have a training innovate which they "learn" to detect the proper patterns and act in keeping with their input. Once a system is fully trained, it can

then get in test phase, where it's hit with more examples and that we see how it performs. Obviously, the training phase cannot cover all possible examples that a system may cope with within the universe. These systems is fooled in ways in which humans wouldn't be. for instance, random dot patterns can lead a machine to "see" things that aren't there. If we depend on AI to bring us into a brand new world of labour, security and efficiency, we'd like to make sure that the machine performs as planned, which people can't overpower it to use it for his or her own ends.

8.5 Racist robots. How do we eliminate AI bias?

Though AI is capable of a speed and capacity of processing that's far beyond that of humans, it cannot always be trusted to be fair and neutral. Google and its parent company Alphabet are one in every of the leaders when it involves computer science, as seen in Google's Photos service, where AI is employed to spot people, objects and scenes. But it can fail, like when a camera missed the mark on racial sensitivity, or when a software wont to predict future criminals showed bias against black people.

We shouldn't forget that AI systems are created by humans, who are often a judgemental. Once again, if used right, or if employed by those that strive for social progress, computing can become a catalyst for positive change.

8.6 Security. How do we keep AI safe from adversaries?

The more powerful a technology becomes, the more can it's used for nefarious reasons similarly nearly as good. this is applicable not only to robots produced to switch human soldiers, or autonomous weapons, but to AI systems which will cause damage if used maliciously.

Because these fights won't be fought on the battlegrounds only, cybersecurity will become even more important than on field fights. After all, we're managing a system that's faster and more capable than us by orders of magnitude.

8.7 Evil Genies. How do we protect against unintended consequences?

It's not just adversaries we've to stress about. What if computing itself turned against us? this does not mean by turning "evil" within the way a person's might, or the way AI disasters are depicted in Hollywood movies. Rather, we are able to imagine a sophisticated AI system as a "genie during a bottle" which will fulfil wishes, but with terrible unforeseen consequences.

In the case of a machine, there's unlikely to be malice at play, only a scarcity of understanding of the complete context during which the wish was made. Imagine an AI system that's asked to eradicate cancer within the world. After plenty of computing, it spits out a formula that does, in fact, achieve the tip of cancer – by killing everyone on the world. the pc would have achieved its goal of "no more cancer" very efficiently, but not within the way humans intended it.

8.8 Singularity. How do we stay in control of a complex intelligent system?

The reason humans are on top of the organic phenomenon isn't right down to sharp teeth or strong muscles. Human dominance is nearly entirely thanks to our ingenuity and intelligence. we are able to get the higher of larger, faster, stronger animals because we will create and use tools to regulate them: both physical tools like cages and weapons, and cognitive tools like training and conditioning.

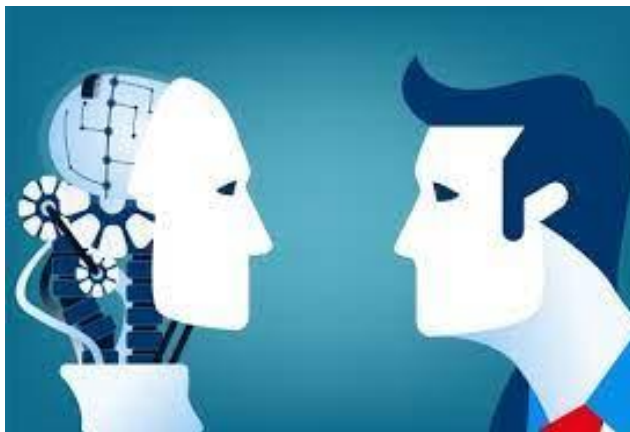
This poses a heavy question about artificial intelligence: will it, one day, have the identical advantage over us? we won't depend upon just "pulling the plug" either, because a sufficiently advanced machine may anticipate this move and defend itself. this can be what some call the "singularity": the purpose in time when people at large aren't any longer the foremost intelligent beings on earth.

8.9 Robot Rights. How do we define the humane treatment of AI?

While neuroscientists are still engaged on unlocking the secrets of conscious experience, we understand more about the fundamental mechanisms of reward and aversion. We share these mechanisms with even simple animals. In a way, we are building similar mechanisms of reward and aversion in systems of computing. as an example, reinforcement learning is comparable to training a dog: improved performance is reinforced with a virtual reward.

Right now, these systems are fairly superficial, but they're becoming more complex and life-like. Could we consider a system to be suffering when its reward functions provides it negative input? What's more, so-called genetic algorithms

work by creating many instances of a system without delay, of which only the foremost successful "survive" and mix to create the subsequent generation of instances. This happens over many generations and may be a way of improving a system. The unsuccessful instances are deleted. At what point might we consider genetic algorithms a kind of mass murder?



IX. LAWS, DATA PROTECTION, PRIVACY

In the absence of an express law, there are different piecemeal judicial and legislative developments that dictate data protection in India. The IT Act, 2000, which deals with cybercrime and e-commerce, under its section 43A details the knowledge about Information Technology (IT) Rules, 2011, for reasonable security practices' for the handling of 'sensitive personal data or information'.

These rules impose limits on the scope of organizations to collect, use, retain and disclose the private data of individuals, and want them to have a privacy policy. These rules don't seem to be without its loopholes, though, for they apply only to corporate entities and also the disclosure-with-consent clause is rendered powerless when it is a unit that seeks the knowledge. Hence, by leaving the government out of its ambit, the IT Rules only give marginal control to citizens over their personal information. A relook at the efficiency of our laws was mandated following the apprehensions and a subsequent petition in 2012 accusing the Aadhar scheme of violating the right to privacy.

In the landmark Puttaswamy judgement of May 2017, the Supreme Court announced the 'right to privacy' as a fundamental right of all citizens. the govt. then recognized that informational privacy was an intrinsic element of privacy and hence founded an expert committee under the chairmanship of Justice BN Srikrishna, to elongate a knowledge protection framework for India.

The Indian version of the law borrows heavily from other laws round the world, particularly the rights-based European model and thus the American model supported liberty protection. It clearly defines personal data as any information which is able to reveal the identity of a non-public, and sets apart certain classes like financial data, biometric data, caste, religious or philosophy as sensitive personal data.

A defining principle of this framework is that of holistic application which recognises the proper to shield data from both the state and non-state actors, hence finally bringing the govt. and its bodies, too, within the ambit of an information protection law. The law gives the citizens (data principals) a right to be forgotten by withholding the organisations (data fiduciaries) from storing their personal information beyond a specific specified time. The law also minimises processing by all organisations, who enjoy access to non-public data of people, to a bare minimum and subjects it to an consent, hence upholding autonomy of the information principals.

While there are some specific conditions where the fiduciaries are empowered to process data without any consequences, the sensitive personal data is removed from this scope. It lays down strict guidelines for the transfer of information across national boundaries, hence providing for data localisation. Some organisations which enjoy a greater access to non-public data, like social media intermediaries, are classified as significant data fiduciaries and are required to appoint a DPO to put data protection at par with other core functions of an industry.

The bill also proposes to line up an information Protection Authority at the central level, for ensuring compliance and providing a grievance redressal mechanism. Most significantly, the proposed law is required to be agnostic to technology so as to adapt to the complex requirements of a dynamic digital world.

The expert report, after taking into consideration public comments and suggestions, was made into the non-public Data Protection (PDP) Bill, 2019, which was introduced within the parliament in December 2019 and has been noted a commission, whose approval is awaited.

X. CONCLUSION

There may be a trade-off between privacy and utility, but data protection laws are not intended to stifle the AI ecosystem. In order to keep innovation and research thriving, the way forward for the AI community is to find the right balance between compliance and data usage. For instance, there are very efficient ways for data anonymization which allow to preserve the identity of individuals.

Techniques like differential privacy, federated learning and split learning have made it possible to train AI models on vast swathes of data without endangering privacy. On the other hand, there are also algorithmic ways to protect privacy, through the use of AI models to detect data leaks and cyber security breaches. Therefore, AI is also beneficial to privacy in certain ways.

MY THOUGHTS

AI has raised fundamental questions about what we should do with these systems, what the systems themselves should do, and what risks they have in the long term. They also challenge the human view of humanity as the intelligent and dominant species on Earth.

We have seen issues that have been raised and will have to watch technological and social developments closely to catch the new issues early on, develop a philosophical analysis, and learn for traditional problems of philosophy.

Some ethical questions are about mitigating suffering, some about risking negative outcomes. While we consider these risks, we should also keep in mind that, on the whole, this technological progress means better lives for everyone. Artificial intelligence has vast potential, and its responsible implementation is up to us.

REFERENCES

- [1]. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7605294/>
- [2]. <https://plato.stanford.edu/entries/ethics-ai/>
- [3]. <https://indiaai.gov.in/article/the-interplay-of-ai-data-and-privacy>
- [4]. <https://www.weforum.org/agenda/2016/10/top-10-ethical-issues-in-artificial-intelligence/>
- [5]. <https://www.simplilearn.com/tutorials/artificial-intelligence-tutorial/types-of-artificial-intelligence/>
- [6]. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7605294/>
- [7]. <http://www.dw.com/en/european-union-unveils-plan-to-regulate-ai/a-52429426>
- [8]. https://scholar.google.com/scholar_lookup?title=Computer+Power+and+Human+Reason+from+Judgement+to+Calculation&author=W+Joseph&publication_year=1976&
- [9]. <https://www.forbes.com/sites/bethkindig/2020/01/31/5-soon-to-be-trends-in-artificial-intelligence-and-deep-learning/>
- [10]. https://en.wikipedia.org/wiki/Artificial_Intelligence
- [11]. https://scholar.google.com/scholar_lookup?journal=%E2%80%9CMicrosoft+develops+AI+to+help+cancer+doctors+find+the+right+treatment%E2%80%9D+in+Bloomberg+News&author=B+Dina&publication_year=2016&
- [12]. <http://www.dw.com/en/european-union-unveils-plan-to-regulate-ai/a-52429426>
- [13]. <https://www.4isrnet.com/artificial-intelligence/2020/03/06/the-intelligence-community-is-developing-its-own-ai-ethics/>
- [14]. <https://mdw.com/en/can-ai-be-free-of-bias/a-43910804>
- [15]. <https://www.nature.com/articles/d41586-020-00160-y>
- [16]. https://en.wikipedia.org/wiki/Artificial_Intelligence