

# Artificial Intelligence: Threat to Humans

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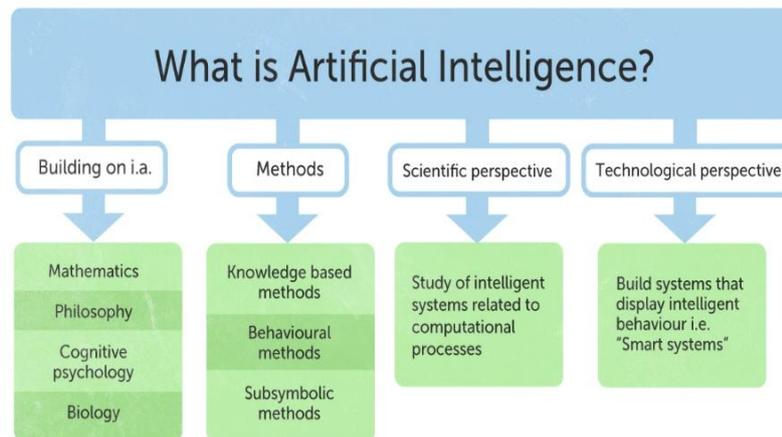
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**Abstract:** This paper have briefly discuss about how Artificial Intelligence how AI can create risk or imposed threat to human life. Advancement in AI technologies has led to concern among humans that robots and machine will take-over the world. Paper has mentioning some expert opinions about AI and some of the solution that can be implemented to have control over AI. Paper also mentions some of the loopholes of AI trough which human life is at verge of risks if any person gets possession of AI with bad intent in their minds.

**Keywords:** AI (Artificial Intelligence), Weak AI (Narrow AI), Strong AI (General AI) and Super-Intelligence AI, Autonomous Weapons Systems (AWS).

## I. INTRODUCTION

AI (Artificial Intelligence) is not new concept of computer science but lately significance of AI(Artificial Intelligence) has increased after advancement in technologies. The term AI was coined back in 1956 by John McCarthy and Marvin Minsky, described artificial intelligence as any task performed by a machine that would have previously been considered to require human intelligence. Mathematician Alan Turing was the first to question: “Can Machine Think?” [1].



**Figure 1:** Artificial Intelligence [7]

AI is a general term for techniques that allow computers to work with information to make predictions, and from this to make decisions [2]. It encompasses a very wide range of overlapping methods and uses illustrated in the diagram below.

Turing paper “Computer Machinery and Intelligence” (1950), and it’s subsequent Turing Test, established the fundamental goals and vision of artificial intelligence [1]. According to Turing Test there are four pillars of AI (Artificial Intelligence):

1. Thinking humanly.
2. Acting humanly.
3. Thinking rationally.
4. Acting rationally.

Turing Test also defines that “AI is replication or simulation of human brain and biological neural network”. AI are mainly three types of Weak AI (Narrow AI), Strong AI (General AI) and Super-Intelligence AI.

1. **Weak AI (Narrow AI):** which has less capabilities than average human brain.
2. **Strong AI (General AI):** which has same capabilities like average human brain.
3. **Super-Intelligence AI:** which surpasses capabilities of human brain.

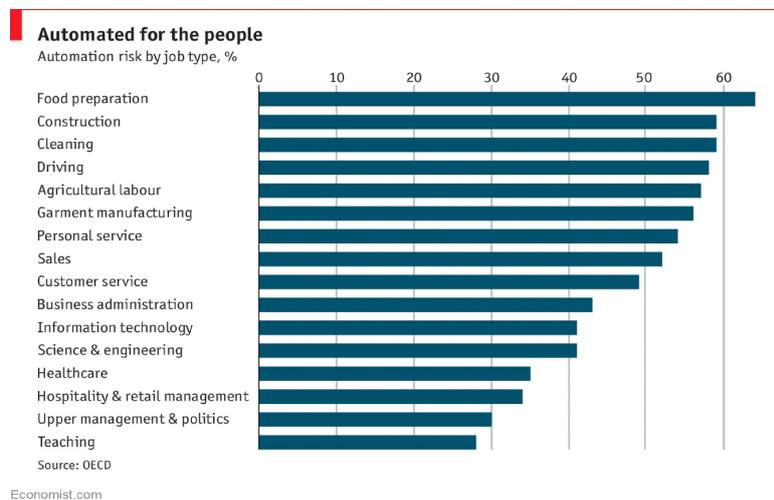
The rapid growth of AI and advancement in its capabilities has led to question: “Is AI dangerous? Can AI destroy human life? Or will AI take over the world?”

AI (Artificial Intelligence) could be programmed to create harm to human life in numerous way like autonomous weapons could be programmed to kill. This would lead to war and cause mass casualties and human killing, potentially even end human life across the world. AI could be developed a destructive method for achieving its objectives like instructions given to ‘intelligent car’ to drive car “as fast as possible” due to which AI (Artificial Intelligence) system will not follow rules, safety etc. the other incident was where Sophia AI robot conveyed that it will destroy humans. This could be possible if AI (Artificial Intelligence) comes in possession of wrong person. This paper is going to discuss about how AI (Artificial Intelligence) can cause harm to human life.

## II. METHODS

### 2.1 Job Automation

Job automation is one of the major concern to humans. AI will take over certain type of jobs. According to a 2019 Brookings Institution study, 36 million people have high exposure to automation that means at least 70 percent of their task ranging from retail sales, market analysis, hospitality and warehouse will be done using AI (Artificial Intelligence) [3]. As AI robots have capabilities to learn from its surroundings this leads to increase their smartness which will add tasks and require less humans.



**Figure 2:** Daily chart - A study finds nearly half of jobs are vulnerable to automation | Graphic Detail | The Economist.

### 2.2 AI-Enabled Terrorism

The possession of AI comes in possession of wrong person. Person would program or develop autonomous weapons like robots, drones, nuclear arms and ammunitions to kill masses. AI is gradually becoming ubiquitous and cheap for all it is matter of time until they appear on the black market and in the hands of terrorists, dictators. In addition to being concerned with a nuclear arms race. Autonomous weapons are ideal for tasks such as assassinations, destabilizing nations, subduing populations and selectively killing a particular ethnic group. The endpoint of this technological trajectory is obvious: autonomous weapons will become the killing machine/death weapons.

### 2.3 Global military AI Arms Race

If any major military power pushes for development of AI arms and ammunitions then global arms race is virtually inevitable and end of this race would be tragic. This AI weapons would become source of assassination and creating distress among nations and would result in end of human race round the globe. So it is believed that a military AI arms race would not be beneficial for humanity. The U.S. Military's proposed budget for 2020 is \$718 billion. Of that amount, nearly \$1 billion would support AI and machine learning for things like logistics, intelligence analysis and weaponry [3]. we'll need to monitor the global autonomous weapons race.

### 2.4 Privacy and Security Concerns

The malicious use of AI could lead to threat to digital privacy and securities of humans such as criminals or hackers would train machine to create threat for humans, non-state actors are equipping drones with arms and ammunitions and selling to consumer. AI has ability to trace person activities on social media platform which arise the issues of privacy and security and this data is sold to some company to influence their minds of person to certain matters.

### 2.5 AI Surveillance

Artificial Intelligence technology has given us capabilities to unlock and access our devices using facial recognition techniques. AI allows to keep a watch on person activities. In China and other countries, the police and government are invading public privacy by using face recognition technology [4]. Bostrom explains that AI's ability to monitor the global information systems from surveillance data, cameras, and mining social network communication has great potential for good and for bad [4].

### 2.6 Deep-Fakes

Deep-Fakes can be done using AI, where the fake identity or face of person could be created without person permission. Deep-Fakes could be used to spread rumours and fake news by using that person identity result in riots and distress among certain groups and could lead to law and order situation for government authorities and would eventually lead to killing of humans.

### 2.7 AI Bias and Socio-Economic Inequality

AI has ability to monitor activities of users on social media. Various companies are tracking users data from what they do? to what they like? then this data is given to certain analytical companies to analyse the behaviour of users and slow influence their mind to certain things. This is widely used by political parties and other product based companies to influence users mind and create biased opinions towards certain things. socio-economic inequality has increased because of job automations and various other factors. This bias and socio-economic inequality is because of AI system developed by humans and humans are biased in nature. Google researcher Timnit Gebru said the root of bias is social rather than technological, and called scientists like herself "some of the most dangerous people in the world, because we have this illusion of objectivity." The scientific field, she noted, "has to be situated in trying to understand the social dynamics of the world, because most of the radical change happens at the social level." [3]. "A.I. researchers are primarily people who are male, who come from certain racial demographics, who grew up in high socioeconomic areas, primarily people without disabilities," Russakovsky said. "We're a fairly homogeneous population, so it's a challenge to think broadly about world issues." [3].

## III. RESULT

Artificial Intelligence is one of the most sophisticated and booming technology of computer science. AI has eased human lives in numerous ways from automation to learning, understanding the environment and accordingly responding to the inputs from the surroundings. AI has similar functionality to that of the human brain and biological neural network which indeed allows the developer of make robots and other intelligent system act and think like humans. Developer has recently added features of emotions and feeling which make them understand human feelings.

This feature has received positive response from humans and humans may feel like that he/she is talking to real humans. But some of recent incident like in March of 2016, Sophia's creator, David Hanson of Hanson Robotics, asked Sophia during a live demonstration at the SXSW festival, "Do you want to destroy humans?...Please say 'no.'" With a blank expression, Sophia responded, "OK. I will destroy humans." [5]. This raises the concern among humans that bots will take-over the world and destroy the whole human races. AI has ability to learn and integrated with job automations feature it would take away human jobs and fewer jobs will be available which will lead to economical inequalities and human could die due to starvation if he/she don't have wealth to spend for his/her basic needs. AI has become ubiquitous and cheap due to which any one can program AI to achieve something devastating and if this technology comes in hands of terrorist then they can create problem for the world. World's major military has investing in AI which has led to global AI arms race which is not beneficial for humanity. Moreover, an AI arms race could inadvertently lead to an AI war that also results in mass casualties. To avoid being thwarted by the enemy, these weapons would be designed to be extremely difficult to simply "turn off," so humans could plausibly lose control of such a situation.

AI can strike on privacy and securities of users by keeping track of user activities on internet which are used by tech companies to manipulate user mind set and create bias opinions about certain things by using user data.

According to experts how AI will take-over?

- **Stephen Hawking:** "One can imagine such technology outsmarting financial markets, out-inventing human researchers, out-manipulating human leaders, and developing weapons we cannot even understand. Whereas the short-term impact of AI depends on who controls it, the long-term impact depends on whether it can be controlled at all." [6].
- **Elon Musk:** "I think we should be very careful about artificial intelligence. If I were to guess like what our biggest existential threat is, it's probably that. So we need to be very careful with the artificial intelligence. Increasingly scientists think there should be some regulatory oversight maybe at the national and international level, just to make sure that we don't do something very foolish. With artificial intelligence we are summoning the demon. In all those stories where there's the guy with the pentagram and the holy water, it's like yeah he's sure he can control the demon. Didn't work out." [6]
- **Sundar Pichai:** "We recognize that such powerful technology raises equally powerful questions about its use. How AI is developed and used will have a significant impact on society for many years to come. As a leader in AI, we feel a deep responsibility to get this right." [6].
- **Jayshree Pandya:** "Technological development has become a rat race. In the competition to lead the emerging technology race and the futuristic warfare battleground, artificial intelligence (AI) is rapidly becoming the center of global power play. As seen across many nations, the development in autonomous weapons systems (AWS) is progressing rapidly, and this increase in the weaponization of artificial intelligence seems to have become a highly destabilizing development. It brings complex security challenges for not only each nation's decision makers but also for the future of the humanity." [6].
- **Tim Cook:** "Advancing AI by collecting huge personal profiles is laziness, notefficiency. For artificial intelligence to be truly smart, it must respect human values, including privacy. If we get this wrong, the dangers are profound. We can achieve both great artificial intelligence and great privacy standards. It's not only a possibility, it is a responsibility. In the pursuit of artificial intelligence, we should not sacrifice the humanity, creativity, and ingenuity that define our human intelligence." [6].
- **Satya Nadella:** "Digital technology, pervasively, is getting embedded in every place: everything, every person, every walk of life is being fundamentally shaped by digital technology—it is happening in our homes, our work, our places of entertainment. It's amazing to think of a world as a computer. I think that's the right metaphor for us as we go forward. Technology developments just don't happen; they happen because of us as humans making design choices—and those design choices need to be grounded in principles and ethics, and that's the best way to ensure a future we all want. One of the fundamental challenges of AI, especially around language understanding, is that the models that pick up language learn from the corpus of human data.

Unfortunately the corpus of human data is full of biases, so you need to invest in tooling that allows you to de-bias when you model language.” [6].

#### **IV. CONCLUSION**

The best way to prevent AI from harming human lives is imposed some of regulations. We have to minimizing the bad effects of AI. We need a public body who constantly monitors that everyone is developing safe AI system. This public body will regulate that “where we need AI?” and “where we don’t?”. but we should ensure that no hold back in progress of basic technology because this will act as a disadvantage for countries that lags in AI development. Autonomous weapons require a treaty that permits certain applications of AI, but it should have a clause of ban AI weapons. From the past technology has helped humans lives, but we have never faced the possibilities of machine becoming smarter. We should define that how AI can evolve. We must be aware of which task we want to train machine to do in informed manner not just keeping individual also society in mind. Numerous people in an array of fields have to make sure that AI fulfils it’s huge potential and strengthens society instead of weakening it.

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