A Review of Robotics and AI's Future with Ethical Perspectives

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Abstract -

In recent years, there has been a greater focus on the potential influence of future robotics and artificial intelligence systems. Several prominent philosophers have openly expressed their concern about the dangers of When the in tricacy of these systems becomes much further; it might lead to a dismal future. These The current state-of-the-art of robots and AI technologies stands in stark contrast to these warnings. This article examines research that considers both robots and artificial intelligence's future possibilities systems, and ethical concerns that must be addre ssed in order to prevent a dystopian future. There are references to current attempts to lay forth ethical principles or both the design and implementation of systems and the way they work.

Index Terms - Review, ethics, technology risks, machine ethics, future views Keywords:

I. Introduction

Since the dawn of technology, authors and filmmakers have been avidly forecasting how the

future might look as more advanced technology became available. One of the first—
as time went on, there were others.

Business executives and academics have recently cautioned that current AI breakthroughs might have big ramifications in today's society:

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• I'm on the side of those who are concerned about super intelligence." Bill Gates said in an Ask Me Anything interview on the Reddit social media site, "
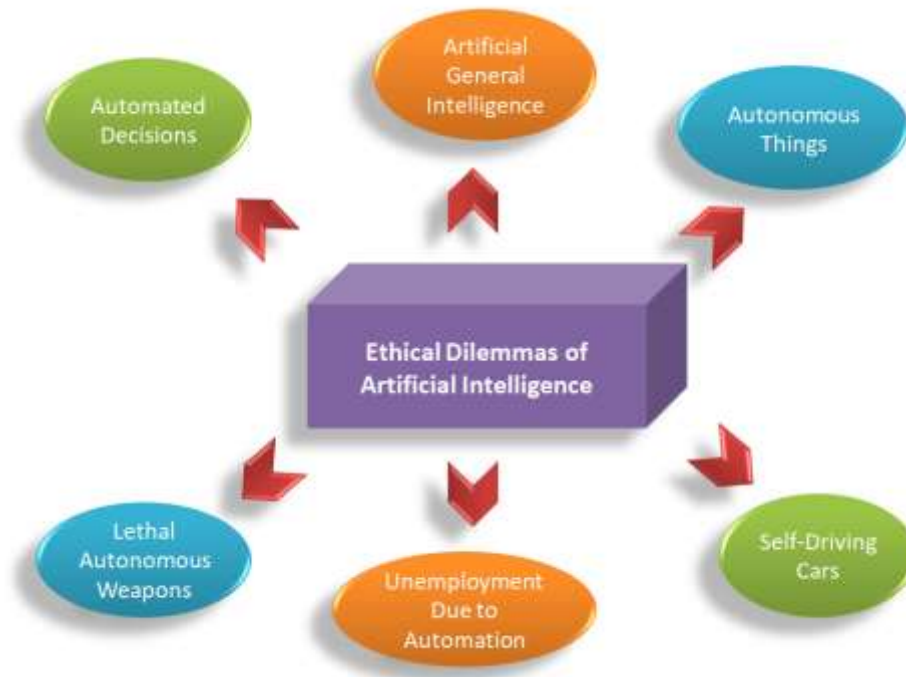
Fig: Ethical Dilemmas of Artificial Intelligence

The early invention of technology, been actively predicting How the future would look with the appearance of more advanced technology. One of the first later regarded as the father of science fiction is the French author Jules Gabriel Verne (1828– 1905). He published novels about journeys under water, around the world (in 80 days), from the earth to the moon and to the center of earth. The amazing thing is that within 100 years after publishing these ideas, all except the latter were made possible by the progression of technology. Although it may have happened independently of Verne, engineers were certainly inspired by his books (Unwin, 2005). In contrast to this mostly positive view of technological progress, many have questioned the Negative impact that may lie ahead. one of the first science fiction feature films was fritz lang's 1927 german production, metropolis. The movie's setting is a futuristic urban dystopian society with machines. later, m ore than 180 similar dystopian films have followed,1 including the terminator, Robocop, the mat rix, and AI. whether or not these are motivating or discouraging for today's researchers in robotics and AI is hard to say but at least they have put the ethical aspects of technology on the agend recently, business leaders and academics have warned that current advances in AI may have major consequences to present society:

• "Humans, limited by slow biological evolution, couldn't compete AND WOULD BE SUPERSEDED BY Stephen hawking in BBC interview 2014.
• AI is our "biggest existential threat," elon musk at Massachusetts institute of technology duringan interview at the aeroastro centennial symposium (2014).
• "I am in the camp that is concerned about super intelligence." bill gates (2015) wrote in an ask meanything interview on the reddit networking site.

2 Robotics and Ai's Future Potential

According to several reports, the number of robots in the future will skyrocket (e.g., mar, 2015; fir, 2016; sea, 2016). many of these will be industrial robots in the near future. however, robots and autonomous systems, such as life driving automobiles and service robots at work and at home, are projected to become more widely used in society in the future. how fast we will witness a transition is a difficult topic to answer. the technology that surround us come in a variety of shapes and sizes, with varying degrees of development and effect on our lives.
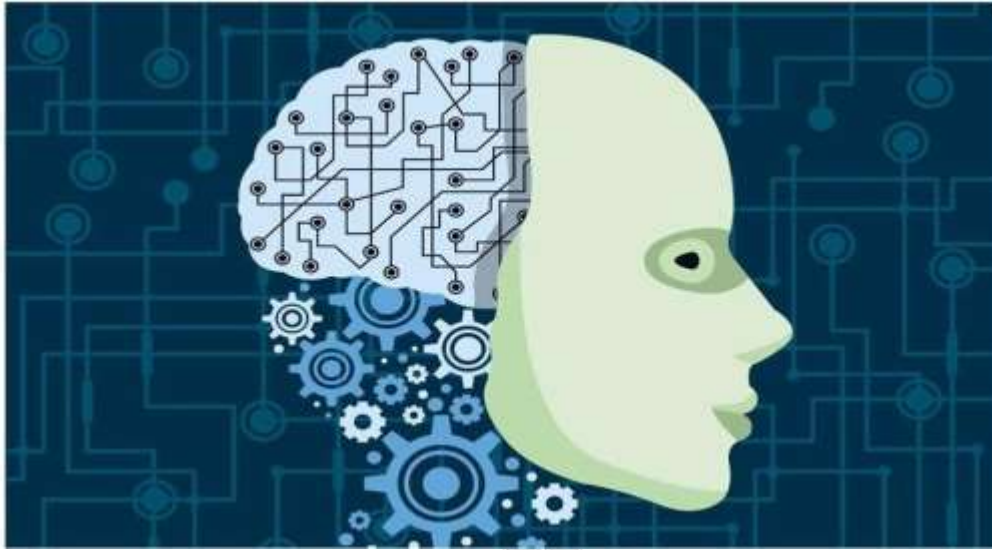
Fig:Artificial Intelligence (AI) and Robots

The following is an example of a broad categorization:• industrial robots: they have been around for a long time a nd have had a significant influence on industry. They generally consist of a robot arm with a number of degrees of freedom that has been preprogrammed by a human teacher (nof, 1999).

• service robots: a robot that performs helpful activities for humans or equipment in a semi or completely autonomous manner, excluding industrial automation applications (ifr, 2017). they are now used in a few scenarios, including hospital internal transportation, lawn mowing, and vacuum cleaning.

• Artificial Intelligence (AI): software that enables technology to adapt to new situations by learning.

3 what degree of humanity should robots achieve?

How close can a robot go to a biological specimen? it is contingent on advancements in a variety of domains, incl udiNG ARTIFICIAL INTELLIGENCE (AI) methods, computing power, vision systems, voice recognition, speech synthe sis, human–computer interface, mechanics and actuators, or artificial muscle fibers are all examples of technologies. it is unquestionably multidisciplinary. A problem (bar-Cohen and Hanson, 2009). do we desire human-like robots now that we have the technology to make them? many people are likely to be terrified at the prospect of humanoid robots caring for us as we age. there's also a theory known as the uncanny valley (macdorman and is higuro, 2006). to become increasingly more human-like the "uncanny valley" describes the decline and gain in comfort as a robot gets more human like. although we are concerned about the lack of human interaction that may arise from being surrounded by robots, many people would prefer machines to humans for certain activities. despite the fact that most people like assis ting others, the sensation of being a burden to others is unpleasant, and we receive a sense of dignity from taking care of our basic requirements on our own. as a result, when a machine can assist us, we prefer it in particular situ ations. today, we can witness this with the internet. rather of asking people for guidance on how to tackle an issue, we turn to the internet for help. we are probably able to accomplish things using machines that we would not be able to do otherwise. as a result, when a machine can assist us, we prefer it in particular situations. today, we can witness this with the internet. rather of asking people for guidance on how to tackle an issue, we turn to the intern et for help. we are probably able to accomplish things using machines that we would not be able to do otherwise. as a result, much as goggle assists us with our information requirements now, robots will assist us with our physic al needs. of course, human touch and social connection are still necessary. as a result, it's critical that technology helps us meet our social requirements rather than isolating us. autonomous automobiles might be one of these mea sures, since they would allow the elderly to get out and about more independently, allowing them to maintain an a ctive social life.

Developers of Robots: Ethical guidelines

Isaac Asimov (1920–1992), a professor and science fiction writer, foresaw the need for ethical guidelines for robot conduct in 1942. as a result, his three guidelines (Asimov, 1942) have been often cited in science fiction literature and by scholars who study robot morality:

1. a robot may not damage a human being or enable a human to be injured via inactivity.

2. Except when such commands contradict with the first law, a robot shall obey orders supplied by humans.

3. A robot must defend its own existence as long as this does not violate the first or second laws. Is it possible that the robots

themselves, realising their superiority to humans, will strive to enslave us? We are still a long way from the worst-case situations depicted in literature and movies, but there are reasons to be concerned. First, there are robots. We are still a long way from the worst case situations depicted in literature and movies, but there are reasons to be concerned. To begin with, robots are mechanical devices that may inadvertently harm us. The acquired information might then be accessed by unauthor ised parties and made available to others over the Internet if the sensory system is functional. This is now a proble m with infiltration on our systems, but future robots may also be subject to hacking. For robots that collect a lot o f audio and video data from our houses, this would be a difficulty. We don't want to be surrounded by robots unle ss we know that sensor data is kept within a certain range.

People with criminal intent may reprogramme a robot in your house, or they could have their own robots carry ou t the heist. As a result, having a house robot linked to the Internet puts a lot of pressure on security procedures to avoid misuse. Despite the fact that we must presume that anybody developing robots and AI for them has good intentions, it is critical that the developers consider the possibility of misuse. These intelligent systems must be developed in such a way that the robots are pleasant and helpful, while still being difficult to manipulate in the future f or bad purposes.

DISCUSSION

Technology may be seen and felt as a wave that is crashing down on us whether we want it or not. However, nu merous unique and clever gadgets have been produced that have been quickly phased out of the market due to a lack of acceptance. As a result, what we buy and use has a significant influence on the technology that is accepted and maintained in our society. At the same time, we have little influence over unintended behavioral changes cause d by the way we acquire and utilize technology. Smartphone's and the Internet, for example, have altered the way we live and connect in countless ways. As a result of smart phones, we are now physically closer to technology
than any other living creature. In the future, we will be surrounded by an even more diversified range of
technolog y that will take care of medical examinations, serve us, and transport us where we want to go. However, for us to desire to have such gadgets and systems near by, they must function correctly. Few people would tolerate a robot that struck us accidently or operates too slowly. Mechanical robots may be programmed to learn to act in a pleasa nt and user adaptive manner using artificial intelligence. They would, however, require a large number of sensors, similar to t hose found in our smart phones, and we would need confidence that the information collected would not be exploi ted. There are also a number of additional potential hazards and side effects, thus the work done by a number of committees throughout the world (as mentioned in the preceding section) is considered significant and beneficial fo r future technology development. Nonetheless, there is a significant gap between today's design issues and the dys topian futures depicted in science fiction films. The latter, on the other hand, is likely to have a good impact on o ur knowledge of potential vulnerabilities that should be handled in a proactive manner. This can currently be seen in the numerous projects aimed at defining AI and robot rules.

CONCLUSION

In this article, several viewpoints on the future of AI and robots are offered, including a study of ethical problems associated to the development of such technology and the provision of increasingly complicated autonomous control. Designers of robotic and AI systems should take ethical issues into account, and autonomous systems must be aware of the ethical consequences of their behaviour. Despite the huge difference between the dystopian future sh own in movies and the actual real world, there are reasons to be aware of potential technology threats so that
preemptive action may be taken. As a result, many renowned scholars and business people are now interested in developing laws and standards to guarantee that future technology becomes helpful to reduce the hazards of a
dystopianfuture, as mentioned in the article.

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