

# Maturity and Future of Artificial Intelligence Advances

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## Abstract

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Artificial Intelligence (AI) is one of the most important technology in the world today. She has completely matured in the end of 20 century and revolutionized the 21st century. In general, the field of artificial intelligence seeks to advance the science and engineering of intelligence, with the goal of creating machines with human-like characteristics. This includes developing machines with a wide range of human-inspired capabilities, including communication, perception, planning, reasoning, knowledge representation, the ability to move and manipulate objects, and learning. AI approaches problems using tools and techniques from a wide variety of other fields, including probability and statistics, symbolic computation, search and optimization, game theory, information engineering, mathematics, psychology, linguistics, and philosophy.

AI is one of the hottest buzzwords in tech right now and for good reason. Over the past few years, several innovations and advancements that were previously only the stuff of science fiction have slowly turned into reality.

AI has become a catchall term to describe any advancements in computing, systems and technology in which computer programs can perform tasks or solve problems that require the kind of reason we associate with human intelligence, even learning from past processes. AI is the locomotive of the next human development. The advantages it offers to serve humans at all personal, medical, industrial and commercial levels cannot be overlooked. An increasing number of company's CEOs believe it will significantly change the way they do business Rao et al., 2019[1]. It has helped companies such as Facebook, Google, and Apple to become among the largest in the world. Rather, its development in many areas aims primarily to protect humans and preserve their lives, such as using robots in hard and dangerous work and on the military battlefields. It is also able to follow the health status of patients, and manage all household affairs from identifying and receiving visitors, to alerting the presence of any danger inside the house, such as a fire situation, or a small child falling from above, or an attempt to steal the house, as well as providing assistance for people of determination. Soon, we will witness artificial intelligence driving the internal transport movement in the world, through self-driving cars, trucks and flying drones, as part of the country's ambitious strategy to transform the transport sector into a self-driving sector based on artificial intelligence technologies. Recently company Plus (<https://plus.ai/>). AI drove a driverless truck 4,500 km in the United States to deliver a shipment of butter [2].

Soon also, AI will be able to perform multiple functions on a personal level, for example, it can recognize and interact with your mood, filter products in the markets that match your taste, and determine where you can find them, and will also be able to repair machines on their own without human intervention, from by knowing the vulnerabilities in smart devices, discovering and repairing them, monitoring any hacking attempt or launching electronic attacks, alerting them, and dealing with them immediately.

But on the other hand, there are many negative repercussions that make the process of legalizing the use of artificial intelligence and establishing institutions that spare society the risks of these technologies getting out of control, a necessity. AI technologies affect the size and quality of jobs and job opportunities available as a result

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of replacing humans in many jobs, as well as the dangerous repercussions of the spread of some artificial intelligence technologies in society in the hands of individuals, for example, commercial drones, which may have a direct threat to the movement of people. Air navigation, as well as violating the privacy of individuals, or 3D printers that can be used to print weapons or counterfeit products.

Artificial intelligence also raises some ethical problems, as it is designed to perform useful functions for humanity, regardless of the surrounding or emerging circumstances. Dealing with robots will become our daily routine, in the situation where a child would like to play with robot, Robot can see it as threat from doing his job, and may cause child to be injured or even killed in order to finalize the job for which it was designed. In July 2022, an incident of chess-playing robot fractured the finger of its 7-year-old opponent during a tournament in Moscow, child violated the safety rules of the game by taking his turn too quickly (<https://edition.cnn.com/2022/07/25/europe/chess-robotrussiaboyfingerintlscli/index.html>).

Not only that, but Stephen Hawking, the great physicist, Bill Gates, founder of Microsoft, and Elon Musk, founder of Tesla for smart cars; They all warned of the ability of artificial intelligence to destroy human life.

Consequently, there are many security and ethical challenges and threats posed by the increasing reliance on artificial intelligence in human life, which makes the process of legalizing and regulating its use indispensable for societies that wish to enter the future, take advantage of the advantages offered by technological developments day after day, and avoid threats and risks generated at the same time.

This Talk is structured as following, we will give a brief history of IA maturation, explain types, approach's and branches of AI, we will also highlight the quantity of Academics papers and patents from it start. We will discuss security and ethical issues that will arise in the future. Finally, we will give some concrete example of how IA will change our future daily live And what Industries will AI Change in the future.

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