# Future of AI: What Lies Ahead?

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AI is a new field that is now referred to as "weak AI" (due to limitations). However, establishing strong AI is the future of artificial intelligence. AI can currently only defeat humans in a few particular skills, but it is believed that in the future, AI will be able to beat humans in all cognitive tasks. It will undoubtedly have both positive and negative implications.
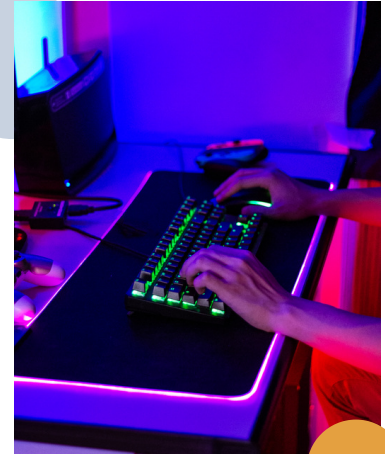
Growth of AI

Before delving into the future of AI, it's important to first grasp what Artificial Intelligence is and where it's currently at. "AI is the ability of machines or computer-controlled robots to execute tasks that are associated with intelligence." As a result, AI is a branch of computer science whose goal is to create intelligent machines that can replicate human behaviour.

AI can be classified into three categories based on its capabilities:

- Narrow AI: It is capable of intelligently accomplishing specific tasks. AI is now in a restricted stage.
- General AI: Artificial General Intelligence, or AGI, is a term that refers to machines that can mimic human intelligence.
- Super AI: Super AI refers to self-aware AI that has cognitive capacities that are superior to humans. It is a level at which machines with cognitive abilities can perform any task that a human can.

At this time, AI is classified as Narrow AI or Weak AI, which can only do specific jobs. Self-driving automobiles, voice recognition, and other technologies are a few of its examples.

What Did the Future of AI Look Like 10 Years Ago?

AI has sparked both dread and excitement for decades, even before the phrase was coined, as humans considered developing machines in their image. This notion that intelligent artefacts must be human-like objects blinded most of us to the truth that AI has been achieved for quite some time. While successes in surpassing human competence in human activities like chess (Hsu, 2002), Go (Silver et al., 2016), and translation (Wu et al., 2016) make headlines, AI has been part of the industrial arsenal since at least the 1980s.

Then, for circuit board inspection and credit card fraud detection, production-rule or "expert" systems became mainstream technology. Similarly, ML methodologies such as genetic algorithms have long been employed for difficult computing problems like scheduling, and neural networks have been used not only to model and comprehend human learning, but also for fundamental industrial control and monitoring.

Probabilistic and Bayesian methods revolutionized machine learning in the 1990s, paving the way for some of the most widely used AI technologies today, such as searching through enormous data sets. This search capability included the ability to perform semantic analysis of raw text, allowing Web users to find the content they are looking for among billions of Web pages by simply typing a few phrases (Lowe, 2001; Bullinaria and Levy, 2007).

Evolution of AI

The founder of computer science, Alan Turing, stated in 1947 that before the end of the century, the usage of words and general informed opinion would have shifted so much that one could speak about machines thinking without expecting to be disputed. It wouldn't be far-fetched to claim that he was correct. Because of the nature of discovery, where previously unthinkable things become commonplace, and the old gives way to the new, it is nearly incomprehensible.

The phrase "artificial intelligence" was first used in the 1950s, even though the idea of thinking machines is centuries old, if only in mythology and legends. Since then, artificial intelligence technology has advanced and changed in several ways, much like its applications.

The study of neural networks dominated the history of artificial intelligence from the 1950s to the 1970s; machine learning applications began to emerge in the next three decades, from the 1980s to the 2010s. Machine learning has given birth to the more nuanced idea of Deep Learning due to constant study, increased interest, and broad application. Additionally, with new chapters opening up every year, the initial research into AI's leap into the unknown has evolved into more of a leap of faith.

Future of Artificial Intelligence

Artificial intelligence (AI) has a bright future, but it also faces several difficulties. AI is predicted to grow increasingly pervasive as technology develops, revolutionising sectors including healthcare, banking, and transportation. The work market will change as a result of AI-driven automation, necessitating new positions and skills.

AI has applications in practically every field, and we'll talk about the future of AI in each of the key fields:

Health Care Industries

India accounts for 17.7% of the world's population, making it the second-largest country after China in terms of population. All citizens of the country do not have access to health-care facilities. It is due to a shortage of qualified doctors, inadequate infrastructure, and other factors. Some people are unable to access doctors or hospitals.

Even if you don't go to the doctor, AI can diagnose diseases based on symptoms by reading data from a fitness band or a person's medical history, analyzing the pattern, and suggesting appropriate medication, which can be ordered easily through cell phones.

Adopters stand to gain a lot from adopting Artificial Intelligence in the future in the healthcare industry. The primary focus of the healthcare industry as a whole has been gathering precise and pertinent data about patients and those who enter treatment. As a result, AI is an excellent fit for the healthcare industry's wealth of data. Additionally, there are several applications for AI in the healthcare industry.

AI is easily expandable, adaptable, and applied to many business processes. We may start to understand the possible use of the technology when we remember that AI is only a computer program. Due to its ability to provide intelligence to jobs that previously lacked it, AI is being used on a huge scale.
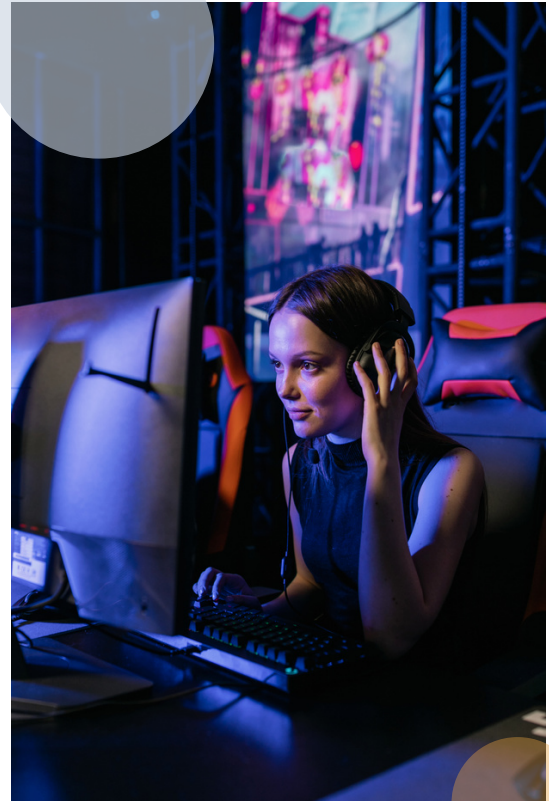
AI in Education

The level of education received by youngsters determines a country's progress. We can see that there are a lot of courses accessible on AI right now. However, AI will change traditional schooling in the future. Manufacturing industries no longer require skilled labourers, as robots and technology have mostly replaced them.

The educational system has the potential to be very effective and tailored to an individual's personality and abilities. It would provide opportunities for brighter pupils to shine, as well as a better opportunity for struggling students to cope up. On the one hand, proper education may strengthen individuals and nations and improper education can have disastrous consequences.

AI in Finance

Any country's economic and financial situation is directly tied to its growth quantification. Because AI has so much potential in practically every industry, it has a lot of potential to improve people's economic health and the economic health of a country. The AI algorithm is now being employed in the management of equity funds.

When determining the optimal approach to handle funds, an AI system could consider a large number of variables. It would outperform a human supervisor. In the world of <u>finance</u>, AI-driven tactics are set to disrupt traditional trading and investing practises. It could be disastrous for fund management organizations that cannot afford such facilities, and it could have a large-scale impact on business because the choices would be made quickly and abruptly. The competition would be fierce and tense at all times.

Future Robo-advisors driven by AI may be expected to be more prevalent in the financial sector. For instance, new research from Wealthramp indicates that Millennials have a more purpose-driven and technologically-centered vision of the future of financial guidance. A third of high-net-worth investors, according to Wealthramp, "use Robo-advisors and digital tools to execute investments." Bionic advice is another growing industry that blends computer calculations with human intuition to improve client connections more effectively than either can do on their own.

AI in Military and Cybersecurity

AI-assisted military technologies have created autonomous weapon systems that do not require people, resulting in the safest way to improve a nation's security. In the near future, we may witness robot military that is as intelligent as a soldier/commando and capable of doing various tasks.

AI-assisted methods would improve mission efficacy while also ensuring the safest execution. The element about AI-assisted systems that is of a little concern is that the algorithm it conducts is not completely explainable. The key issue here would be explainable AI, as deep neural networks grow faster and continue to develop. When technology falls into the wrong hands or makes poor decisions on its own, it might have disastrous consequences.

Transportation

If you believe self-driving vehicles are a thing of the future, think again. Smart cars have already entered the market. Just 8% of automobiles and other vehicles had AI-driven technologies installed in them in 2015, but by 2025, that percentage is predicted to rise to 109%. At the moment, connected cars are all the rage in the automotive business. These vehicles have predictive systems that reliably inform drivers of potential spare component failures, route and driving instructions, emergency, and disaster preventive procedures, and more.

By 2020, connected automobiles with inbuilt wireless connections and networks will be the industry standard. The introduction of autonomous vehicle prototypes is also gradually becoming a reality.

Advertising

AI-powered systems would effectively replicate the campaign with access to historical data and provide accurate results rather than investing thousands of dollars on a campaign to see if it would benefit a certain pool of target audiences. This would revolutionize marketing by giving companies and brands a safe location to invest their funds.

Impact of AI

The productivity of artificial intelligence may boost our workplaces, which will benefit people by enabling them to do more work. As the future of AI replaces tedious or dangerous tasks, the human workforce is liberated to focus on tasks for which they are more equipped, such as those requiring creativity and empathy. People employed in more rewarding jobs may be happier and more satisfied.

With better monitoring and diagnostic capabilities, artificial intelligence has the potential to drastically alter the healthcare sector. AI may help medical institutions and healthcare facilities function better, reducing operating costs and saving money. Potential for personalized medication regimens and treatment plans, as well as increased provider access to data from several medical institutions, are just a few life-changing possibilities.

Privacy Risks

When seen through a privacy-by-design lens, artificial intelligence has not differed from other technologies because privacy has not been prioritized in creating AI technology. In contrast to the risk created by data breaches, the processing of personal data by AI carries a substantial risk to individuals' rights and freedoms while simultaneously carrying very little "fallout" for the firms involved. AI poses several privacy problems, such as:

Data persistence - Due to affordable data storage, data persists longer than the people who produced it.

☑ Data repurposing - Data repurposing refers to using data for purposes other than originally intended.

☑ Data leaks—information gathered about individuals who are not the subject of the data collection.

Data acquired also poses privacy concerns in ai and the future of work, such as freely giving informed permission, the ability to opt-out, restricting data collection, outlining the purpose of AI processing, and even the ability to have data deleted upon request. But how would the individuals whose data was gathered, potentially due to a spillover effect, even be aware that their information had been taken to contact companies about their data or ask for it to be deleted?

Myths About Advanced Artificial Intelligence

- Deep learning, machine learning, and artificial intelligence are all the same.

- All AI systems are "black boxes," whereas non-AI systems are much easier to understand.

- The data AI systems use to learn determines how good they are.

- AI systems are intrinsically unjust.

- AI will replace human work; AI is becoming more human-like.
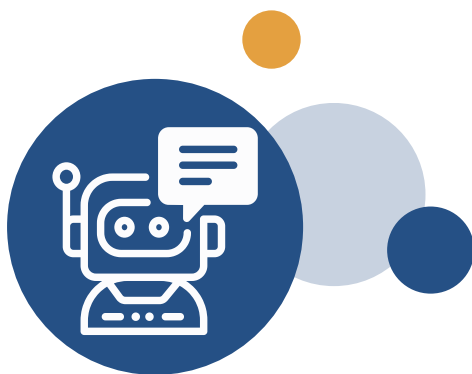
If you are wondering about how artificial intelligence will change the future, then do you know that robots are probably not coming for your employment, at least not yet, so you can put some of your worries to rest?

Given how artificial intelligence has been presented in the media, particularly in some of our favorite science fiction films, it is obvious that the development of this technology has raised concerns about the possibility that humans could one day become redundant in the workplace. After all, many jobs formerly carried out by human hands have been mechanized as technology has improved. It makes sense to worry that the development of clever computers may spell the beginning of the end for employment as we know it. But don't! Jobs will still be out there for you all. That's the basic answer to what is the future of AI.