

Impact of Artificial Intelligence on our Indian Society

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Abstract

These days, everyone in our nation and around the world is familiar with the term Artificial Intelligence (AI) in the context of science and technology. In daily life, people encounter this word in a variety of settings, including corporations, software businesses, universities, schools, and higher education institutions. We have attempted to explain artificial intelligence (AI) in full in this review article, along with some of the positive and negative effects it may have on Indian society in the future.

Keywords

Artificial Intelligence (AI), Indian society.

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Introduction

Human intelligence is the capacity for intellectual achievement exhibited by highly motivated and self-aware individuals as well as sophisticated cognitive accomplishments. Humans can learn, construct concepts, comprehend and apply logic and reason, all thanks to their intelligence. Artificial intelligence, in general, is a computational concept that enables a machine to understand and solve complicated problems in the same way that humans do. As an illustration, we carry out a task, make errors, and grow from them. Similar to this, an artificial intelligence, or AI, is meant to work on a task, make mistakes in addressing it, and then use the mistakes as a teaching tool to develop itself. Alternatively put, picture this as a game of chess. Your odds of winning the game decrease with each poor decision you make. Therefore, each time you lose against your friend, attempt to recall the mistakes you made and use that information in your upcoming game. With time, accuracy improves, and in this situation, so does the likelihood of succeeding or resolving an issue.

Methods by Which Humans Consider and Understand Things

- If you're having trouble, consider a previous instance in which you handled a challenge of a like nature.
- If you act, consider the possible consequences.
- If something doesn't work out, consider what you could have done better.
- When something happens, attempt to deduce what might have happened before.
- If you see something, consider who might own it. Consider who might possess an item if you come across one.
- Consider the reason behind a person's actions when you witness them.

Ways that People Think and Learn about Things

- If you have a problem, think of a past situation where you solved a similar problem.
- If you take an action, anticipate what might happen next.
- If you fail at something, imagine how you might have done things differently.
- If you observe an event, try to infer what prior event might have caused it.
- If you see an object, wonder if anyone owns it. If you see an object, wonder if anyone owns it.
- If someone does something, ask yourself what the person's purpose was in doing that.

Literature Survey

This part is based on a Cook (1985) chapter that is being studied. There has been discussion about the potential for thinking machines ever since Charles Babbage began developing his “analytical engine” in about 1833. A particularly fascinating history of the discipline’s growth is given by Kurzweil (1985), who traces a path that starts with mathematicians and philosophers like Bertrand Russell and Allen Turing and concludes with modern computer scientists like Herbert Simon and Allen Newell. While other tales relate AI’s origins to over a century ago, the word “artificial intelligence” is generally attributed to John McCarthy, who used it in a 1956 grant application for a conference he was organizing. Researchers from a variety of disciplines came together for this conference at Dartmouth College with a shared interest in the study of human and machine cognition. The meaning of AI has become hazy due to its increasing popularity. The fact that, AI’s roots are interdisciplinary and lack a single core idea that defines its boundaries has likely made this worse. One commonly used definition of AI technology is anything that deals with programming a machine (computer or robot) to act in a way that would be deemed intelligent if done by a human. Of course, one of the issues with this definition is that it necessitates defining “intelligent” in more detail. AI can also be defined as any technology that makes it possible for a computer or computer-based machine to react in ways that the computer programmer had not predicted. To define artificial intelligence, Kurzweil discusses a number of claims about what AI is and isn’t. He points out that a person’s perception of intelligence as a quality depends on their level of understanding. Therefore, a computer may be deemed to be intelligent if it is shown to behave appropriately in a circumstance and the observer is unable to comprehend how it might have done so. It would probably be considered merely a rote procedure rather than an indication of any natural intellect if one were to learn later how it was done. “One of the few requirements of thinking something is intelligent is that you really don’t understand it very well,” as Winston (1984) noted.

Impact of Artificial Intelligence on the Economy

The digital nature of recent breakthroughs has had the paradoxical effect of lowering entry barriers, which has allowed new companies to overtake incumbents while also swiftly fostering new kinds of industry concentration (Bessen, 2017). With some applications demonstrating significantly lower costs of capital and the potential for productivity gains, particularly among the low-skilled, the current wave of technological change based on advances in artificial intelligence (AI) has created widespread fear of job losses and further rises in inequality. However, there are also large opportunities in terms of productivity increases that can ensue, including for

developing countries. Yet, if the advantages of AI-driven technical advancement are to be widely distributed, concerns in the form of more inequality must be addressed. Skills policies are required for this, but they are insufficient. The article advocates for a cautiously optimistic view on the potential benefits and drawbacks of artificial intelligence, given that policymakers and other stakeholders consider the unique attributes of these emerging technologies. Méda (2016). But most onlookers remain unconvinced. Numerous experts have cautioned that throughout the next few decades, advancements in robotics and artificial intelligence may result in a large number of job losses or employment polarization, which would increase income and wealth inequality (Korinek & Stiglitz, 2017).

Artificial Intelligence's Effect on Environmental and Ecological Studies

Because ecology is such a broad and diverse field, analysis and statistics are essential to improving research and, ultimately, technology and outcomes. There has always been a need for tools that can support ecological reasoning rather than just aiding in data gathering and analysis because of how difficult the labor itself is. AI-derived modeling and methodologies have changed ecology in both primary and applied studies, and have been important in its progress. Artificial intelligence is being used in ecology to help with the seeming inadequacy of organizing and analyzing a wide range of ecological knowledge. This improves process efficiency and addresses data collection restrictions. Expert systems including knowledge engineering—also known as the process of extracting and applying an expert's knowledge in a computer program—are among the approaches that researchers have successfully used. (Coulson and others, 1987). Since ecology is a qualitative field of study, it is more challenging to include quantitative findings into mathematical formulations (Brooks, 1999).

Artificial Intelligence's Effect on Agriculture

The Food and Agriculture Organization of the United Nations projects that by 2050, there will be a 2 billion rise in global population. In comparison, at that time, just 4% of the extra land will be under cultivation. Furthermore, this will not be sufficient to feed everyone. Agriculture must therefore be modernized to address the serious global issue of underproduction. AI has a strong potential to alter the agricultural landscape's conventional thinking. AI is useful for several tasks, including harvesting, aerial surveillance, remote sensing, proximity sensing, controlling weeds and pests, and providing advising services. At present, Microsoft is endeavoring to offer advising services to 175 farmers in Andhra Pradesh, India, concerning matters such as seed sowing and fertilizer usage (Bagchi, 2019). Comparing this endeavor

to the previous year, the average high yield per hectare has increased by 30%. An autonomous berry-picking device that uses artificial intelligence to simulate human thought has been created by harvest technologies such as Harvest Croo. The funding and validation issues that AI technology still faces must be resolved before the current agricultural situation can change or get better.

Artificial Intelligence's Effect on Governance

Increasingly, artificial intelligence is the greatest resource available to humanity. In a similar vein, it serves the government of every nation and is indispensable to our daily existence. According to a survey, artificial intelligence (AI) can ease administrative responsibilities and assist in resolving resource allocation issues. There are five main areas into which many AI investigations can be broadly classified: 1. Responding to Inquiries 2. Completing Forms 3. Request Direction 4. The Process of Translation 5. Document drafting As a result, the aforementioned categories greatly aided governmental institutions in carrying out their duties more effectively. (Mehr and Associates, 2017) In an age of cutting-edge technologies that demands vast data, further developments in AI might be considered as a means of propelling any economy's future. According to Accenture, AI has the potential to double economic growth rates by 2035.

Artificial Intelligence's Effect on Education

The global investment in AI will have an impact on the educational system as well. As we previously mentioned, scientists predict that by 2025, artificial intelligence will create more employment than it replaces, but these new positions will require higher skill sets than their predecessors. Governments, educational institutions, and businesses should think about the best ways to create learning programs that give people the skills they need to be competitive in the contemporary economy as new capabilities emerge (Perisic, 2018). As a result, educational establishments will have to prepare their pupils for the workforce. There may be difficulties in the business disciplines of marketing, finance, accounting, and auditing. Automation is possible in disciplines with codified, set rules, norms, and procedures (Siau, 2017). Students in higher education may pursue their interests once artificial general intelligence (or strong AI) begins to develop, and robots now staff hobbies (e.g., arts, history, music, philosophy, political science) since many of the occupations that the students are trained for! Further research is also required on the new role that teachers will play in new educational paths, with a new set of graduation traits, emphasizing imagination, creativity, and innovation—a set of abilities and skills that robots will almost never be able to mimic.

Artificial Intelligence's Effects on Innovation

Certain characteristics of artificial intelligence have the potential to improve the efficiency of the current economy. Furthermore, it can make a greater contribution to the market's "innovation" space. These developments have the potential to impact a wide range of products and services in addition to production. If we take the example of "atom wise," a recently founded company that primarily uses neural networks to identify potential drugs by illustrating the bioactivity of particular individual molecules, we can see two ways in which artificial intelligence is being used in innovative fields. (2018) Cockburn et al. AI has a significant impact on technical issues as well because it is more accurate and economical. Learning or discussing a topic for a long time will eventually improve one's understanding of it, enabling anyone to have a general understanding of the work they are trying to accomplish.

Artificial intelligence (AI) and its effects on the military and defense: AI is quickly becoming an indispensable component of contemporary combat. AI-equipped military systems can process larger amounts of data more effectively than conventional systems. Additionally, because AI has built-in computation and decision-making skills, it enhances battle systems' self-control, self-regulation, and self-actuation. Artificial intelligence is used in practically every military application, and it is anticipated that the military sector will embrace more AI-driven systems as a result of increased funding for research and development from military research organizations to create new and more sophisticated types of AI. AI's current capabilities show a lot of promise for national security. For instance, labor-intensive tasks like cyber defense and satellite imagery analysis could become highly automated thanks to current machine learning technologies (Allen & Chan, 2017).

Impact of Artificial Intelligence in Healthcare and Medicine

The application of AI technology in these fields raises a number of intriguing questions, including whether or not it is merely a hoax or whether or not it can actually assist medical professionals in producing the necessary outcomes. In this discipline, artificial intelligence gathers data from patients through tests and interviews, processes and analyzes it, and then aids in disease diagnosis and therapy. It mostly aids in the treatment of neurology, cardiology, and cancer. The first time artificial intelligence (AI) was utilized in this sector was in 1976, when Gunn diagnosed severe abdominal pain using computer analysis. (Ramesh et al., 2004) AI makes it easier for medical personnel to understand patient patterns and needs. A virtual nurse dubbed Molly has been developed by the startup sense.ly to assist in keeping track of patients and their medical appointments (Novatio, 2019).

Conclusion

We have learned from this examination that artificial intelligence is a broad field encompassing many facets of society and life. Although it is obvious that humans built this artificial intelligence, it appears to be attempting to displace humans in the current situation.. While AI has had many positive and noteworthy effects on our society, it has also had many negative effects. Therefore, in the upcoming decades, it will be our moral obligation to use this new understanding of AI to further human development and advancement for both our nation and the rest of the globe. For the next generation to uphold human values and beliefs for their families and our society, we must teach them how to use AI responsibly.

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