

AI: A POWERHOUSE OF POTENTIAL, BUT ITS FATE LIES IN HUMAN HANDS

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ARTICLE INFO.

Keywords: AI systems, Domains, Technologies, Management Sciences.

Abstract

The potential advantages of the rapidly expanding field of artificial intelligence (AI) and machine learning are enormous. However, in order to prevent unforeseen, negative outcomes and hazards associated with the adoption of AI in society, it is vital to study the whole ethical, social, and legal elements of AI systems. Questions such, "What are the applications of AI in different domains?" "What is the impact of AI on future jobs?" and "Will the AI replace Human brains?" are all explored in this article. Because this is a descriptive research, we have obtained our data from a variety of print and digital publications. The research has also employed online resources for data collection. The research found that although businesses including healthcare, education, manufacturing, and marketing are generally accepting of AI, there are pros and cons to using it. As AI and associated technologies continue to evolve rapidly, they will help service companies provide value for their consumers and streamline their internal operations.

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Introduction: An artificial intelligence (AI) system is often thought to be a computer or machine because of the definition of AI as intelligence shown by an artificial entity to solve complicated issues.

AI combines the fields of computer science and biology. The computational component of the capacity to attain objectives in the world is what we mean when we talk about intelligence. Intelligence is the capacity to engage in certain mental processes successfully, including inventing, creating, memories, comprehending, spot patterns, choosing wisely, adjusting to new circumstances, and growing intellectually. The field of study known as artificial intelligence focuses on teaching computers to think and act more like humans but much more quickly. Artificial Intelligence is a name for this field (*Barrat, J.2013*).

The use of AI in the study of educational technology, management sciences, and operational research is said to be on the rise. The capacity to learn new information and apply it to challenging issues is often cited as an indicator of intelligence. Intelligent robots will soon be able to do many tasks formerly performed by humans. The field of artificial intelligence examines the development of intelligent devices and computer programmes with the ability to think, learn, understand, communicate, manipulate, and sense their environment. In 1956, John McCarthy first used the phrase to describe the subfield of computer science that aimed to provide machines human-like intelligence. Understanding

computation is the key to seeing, reasoning, and acting.

It's a multi-step process that involves building artificial computer systems capable of things like voice recognition, learning, planning, and problem solving. Intelligent systems are those that can change to suit their surroundings. To put it another way, artificial intelligence is the process of creating computer programmes with the ability to mimic human intellect. One definition of AI is the effective management of scarce resources. So, to sum up, artificial intelligence is the process of teaching a computer to think and act like a human being. Therefore, it may be broken down into two parts: the first, like humans, and the second, where a computer solves difficult issues. Another meaning of "artificial intelligence" refers to the wit or cleverness shown by a computer system. Science and technology are brought together in artificial intelligence to create computers with human-like intelligence. Philosophy, psychology, and computer science are just a few of the numerous disciplines that come together in it. (Chouard, T. 2016).

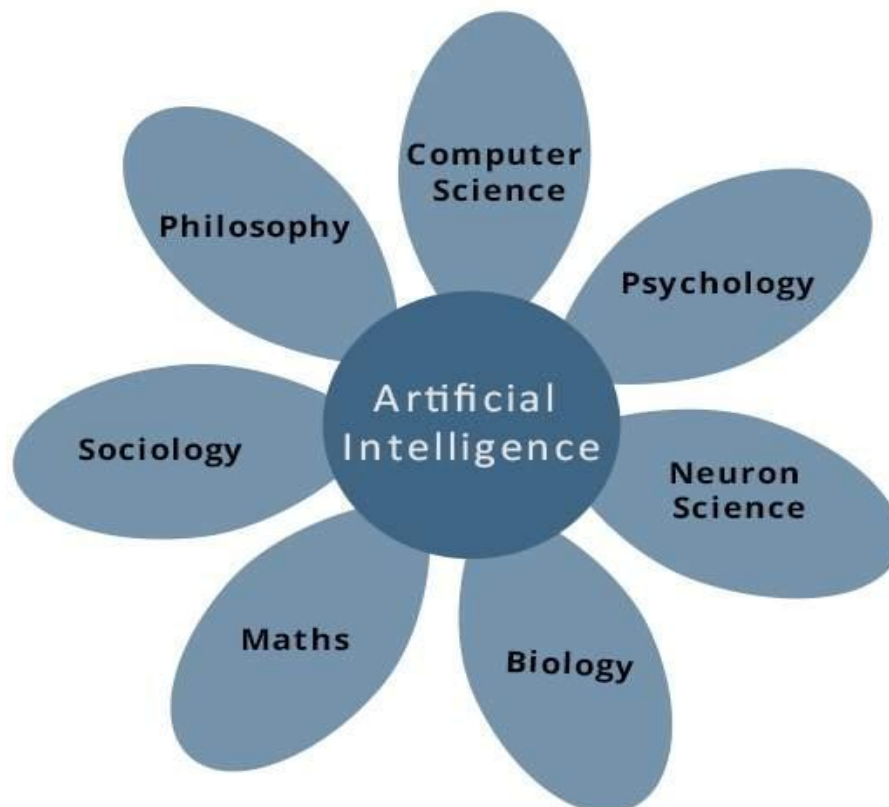


Fig. Disciplines involved in Artificial Intelligence

REVIEW OF LITERATURE:

Verma, Mudit, (2018) intelligent technologies will eventually replaces or supplements human talents in many contexts. The intelligence shown by machines or computer programmes is known as artificial intelligence. It's a specialized branch of computing. Since AI has improved so many facets of human existence, artificial intelligence is quickly becoming a hot topic in the field of computer science. In the previous two decades, artificial intelligence has significantly boosted productivity in several industries, including manufacturing, services, and education. Expert system is a fast expanding technology that originated from research in the area of artificial intelligence. The widespread use of expert systems to handle complicated issues in industries as diverse as education, engineering, business, health, and weather forecasting is only one example of how artificial intelligence is having a profound effect on many facets of modern life. Quality and productivity have improved in fields that have used AI technology. With a focus on AI's potential applications in the classroom, this article provides a broad

introduction to the discipline, including AI's definition, search methods, inventors, and future.

The pros and drawbacks of AI, as well as their numerous applications, are discussed by *Jatin Borana (2016)*. Expert systems are the primary topic, but the book also addresses the use of AI in other areas, including as manufacturing, gaming, aviation, weather forecasting, and heavy industry. The study finishes with a look into the bright future of AI.

Significance of the Study: The use of AI will result in the creation of machines and computers that are much superior to those already available. In the future, speech recognition computers will be able to converse with people in natural, unstructured English utilizing both text and voice. Someday, expert system applications will flourish throughout the whole healthcare industry, from the front lines of patient care to the back offices where decisions about how to allocate scarce financial, social, and other resources are made. The issue of whether or not AI may one day lead to robots smarter than humans remains unanswered, though. It's also impossible to say how long it would take, even if it were feasible. Learning through experience, cognition, and perception are also thought to be present. In this regard the present study is significant enough.

Objectives: The current study has been undertaken with the following objectives-

- To find out the application of Artificial Intelligence in different domains.
- To study the impact of AI on the future jobs.
- To study the dependency of AI on the human beings.

Research Questions: In this article the researcher has tried to find out the answers to the following questions-

- ✓ What are the applications of AI in different domains?
- ✓ What is the impact of AI on future jobs?
- ✓ Will the AI replace Human brains?

Method: Since the present study is descriptive in nature required information have been gathered by following different sources like books, journals etc. Internet sources have also been used for collecting information for the study.

Applications of Artificial Intelligence Technologies:

When it comes to healthcare services, AI has proven most useful when it is used to solve problems that human doctors just can't. The medical field is quickly being dominated by AI technology. With the help of AI, the healthcare industry has begun its transition to an automated model. When developers design AI systems to carry out tasks, the technological obstacles of digitizing healthcare bring additional challenges. The rising number of people in need of medical care is another consequence of this trend. In order to improve quality of treatment and lower costs, the healthcare industry needs innovative approaches. Rapid advances in technology, especially in artificial intelligence and robots, may improve healthcare. The use of AI and robots in healthcare is expanding rapidly, particularly in the fields of early diagnosis and detection. Through the rapid, simple, and cost-effective completion of formerly human jobs, AI has grown in strength. There are risks and challenges associated with using AI, including as the potential for patient injury due to system errors, privacy concerns related to data acquisition, and so on. Artificial intelligence (AI) is crucial for early detection and diagnosis, and it is used in a wide range of contexts to accurately, consistently, and rapidly spot illnesses like cancer. Simply said, it is able to learn and identify relationships on its own and provide a prognosis based on that information. Due of its drawbacks, AI casts a shadow on healthcare's hopeful future. The underlying regulations are not yet ready for this development, and several debates have emerged about whether AI can exercise physicians' rights and responsibilities and preserve privacy concerns (*Clark, J.*

2015).

Educational Services: The introduction of cutting-edge technology into the classroom changes how lessons are delivered. In light of the current COVID-19 epidemic, the employment of artificial intelligence (AI) in the classroom has never been more crucial.

The use of sophisticated software to gain information in one of the aforementioned ways via the use of apps, games, and software is one of the most essential installations that may promote successful participation and learning in elementary, secondary, and postsecondary institutions.

Oftentimes, educators are oblivious to communication breakdowns between themselves and their pupils. Artificial intelligence (AI) offerings may be made to address these issues.

Artificial intelligence (AI) may help educators and students create individualized lesson plans and provide feedback on the courses' overall efficacy. Particularly in online schools, artificial intelligence (AI) technologies track student development and alert teachers to any issues that may occur.

Retail (marketing) services: Many analysts in the field of advertising are now fascinated by AI. Their work contributes to this emerging subject by expanding our understanding of how to use AI in advertising on a global scale. They looked at data from three different perspectives in their research: national, organizational, and individual. The extensive financial resources required for AI deployment vary greatly from country to country, and this disparity is shown by the country-level study. When assessing businesses, globalization is given considerable weight. Since the infrastructure behind these technologies may be found all over the globe, localization is essential for successful rollout. Since AI systems acquire, store, and analyze a vast amount of personal data from people all over the globe, this research focuses on issues of ethics and privacy from the perspective of individual consumers. By looking at AI technologies in marketing via these three lenses, the study's authors were able to zero in on two particularly salient aspects: (1) human-machine interaction; and (2) automated analysis of text, voice, photos, and video. The authors employ a worldwide, three-pronged view to investigate the connection between AI's cognitive and affective components, and they conclude with a list of research topics for the next generation of AI-interested marketers. Rational inventiveness is used in many fields, including marketing. Online retailers may gather vast quantities of information on customers' purchasing habits, shipping addresses, and product specifications because to the convenience of online shopping. This information may help retailers plan for the future and make informed decisions about their store networks, inventory levels, and distribution methods. For instance, Wal-Mart uses a machine learning (ML) image algorithm called "Eden" to anticipate when their brand's items would go bad. The Kroger Company is working on developing a more constrained approach to distribution centre testing to meet customer requirements, while Home Depot employs critical thinking to anticipate stock market possibilities and robots in stock options (*Dreyfus, H. L. 1972*).

Heavy Industries and Space: Expert systems powered by artificial intelligence have helped robotics and cybernetics advance significantly. In the creation of automobiles, machine tools, computer chips, and almost all other high-tech products, the whole manufacturing process is now automated, managed, and maintained by a computer system. They deal with potentially lethal things like radioactive waste. Complex spacecraft man oeuvres are performed in space by unmanned spacecraft piloted by robots. When it comes to robots, Japan is well ahead of the rest of the globe.

Finance: Financial institutions rely on sophisticated software tools for data screening and analysis. It's been shown that stock market trend prediction software can outperform human analysts. Robots triumphed over humans in a simulated stock market battle in August 2001. Artificial neural network technologies have long been used by banks to identify suspicious charges or claims and escalate them for human review.

PROBLEM SOLVING: As long as the issue is well-defined and constrained, AI excels at addressing

it. It is common practise, for instance, to ask a mathematician, physicist, or engineer to prove a theorem. (A theorem is a mathematical statement embedded inside a broader theoretical framework.) This may require a lot of time, effort, and trial and error because to the very vast and intricate formulae involved. Artificial intelligence software tailored to this task may significantly shorten and streamline such formulae in a fraction of the time it would take a person. The use of AI may also help with planning issues. Businesses and factories rely heavily on efficient step-by-step processes that minimize costs and labour. (*Jatin Borana ,2016*). It is feasible to create an AI programme that takes into account every potential action and result. The programmer must also choose the standards by which the program's performance will be evaluated; for example, whether or not minimizing the task's cost is more essential than maximizing its speed, or vice versa. This form of AI programme will develop a strategy faster than conventional approaches.

Artificial Intelligence vs. Human Intelligence: A Comparison

Parameters	Human Intelligence	Artificial Intelligence
Evolution	Human humans are hardwired with the cognitive capacity to think, reason, assess, etc.	It is generally agreed that Norbert Wiener's hypothesis of criticism mechanisms was an important early contribution to the advancement of AI.
Essence	Intelligent people are able to adapt to new situations by combining a wide variety of cognitive abilities.	The purpose of AI research is to develop machines that can mimic human intellect and carry out tasks traditionally performed by people.
Functionality	The cognitive ability, memory, and processing speed that people's brains supply are put to good use.	AI-powered gadgets can't function without the processing of data and instructions,
Pace of operation	Humans can't keep up with AI and robots in terms of speed.	Computers can digest far more data than humans can at a much faster rate. Artificial intelligence can solve 10 times as many mathematical problems in one minute as a human brain can in five minutes.
Learning ability	Human intelligence is built on a foundation of learning from a wide range of experiences and contexts.	For the simple reason that machines can't reason abstractly or learn from their previous mistakes. Only by repeated study and exposure to new information can they learn, but they will never develop a cognitive process comparable to that of humans..
Choice Making	It's conceivable for non-mathematical, subjective considerations to have a role in human decision making.	Decisions made by AI are very objective since they are based on an evaluation of all available data.
Perfection	The term "human mistake," which describes the way certain subtleties might be missed, is virtually always applicable when discussing human insights.	AI is able to consistently provide reliable findings because it is based on a set of rules that may be modified over time.
Adjustments	The human mind is flexible, allowing it to readjust its viewpoints	As a result, individuals improve their memory and general performance in

	in reaction to environmental changes.	several domains. Artificial intelligence requires far more time to adjust to unnecessary changes.
Flexibility	Juggling many responsibilities simultaneously demonstrates that you have good judgement. Similar to how a framework could learn a task at a time,	AI can only do a limited number of tasks simultaneously.

IMPACT OF AI ON THE FUTURE OF JOBS

Automation of Tasks:

The greatest impact of AI has been the digitization and automation of formerly manual operations in many different sectors. These used to be done manually but are now handled entirely electronically. Currently, jobs and activities that need a certain level of repetition or the usage and interpretation of vast volumes of data are transmitted to and managed by a computer; in certain circumstances, human interaction is not necessary to perform these tasks or jobs.

New Opportunities:

As AI automates more and more human-intensive jobs, it opens up exciting new possibilities for the labour force. As a consequence of technological progress, new areas of study and employment have arisen, such as digital engineering. There will be new possibilities and professions to fill the void left by the decline of physical labour.

Economic Growth Model:

AI's promise to boost productivity and internal cooperation is best realised when it is put to practical use rather than pursued for its own sake. Therefore, it may fuel a development model that expands wealth and improves living standards, therefore increasing demand for products and services.

Role of Work:

Understanding the potential of a job goes well beyond merely making ends meet in today's age of artificial intelligence. It shows that you appreciate the importance of making others feel like they are contributing, being appreciated, and needed. Therefore, even routine duties at work may have significance and benefit, and if the duty is deleted or automated, it need to be replaced with something that affords a similar chance for human expression and disclosure.

Growth of Creativity and Innovation:

As a result of advances in robotics, AI, and industrial automation, specialists may devote more time to tasks that need human ingenuity, such as analysis, the development of novel solutions, and the like.

Will AI Replace Humans?

AI may eventually replace people in certain sectors of work, but it also has the ability to automate some chores and vocations. Data-driven choices and the management of repetitive tasks are AI's strong suits. But we still need to make it easier and more beneficial for AI to duplicate human abilities like creative problem-solving, critical thinking, emotional intelligence, and complex-problem resolution people and machines are increasingly likely to work together in the future, with AI enhancing human skills and freeing up people to concentrate on more complex jobs that need their unique brand of inventiveness and experience. Artificial intelligence (AI) should not be seen as a replacement for humans, but rather as a tool that may boost productivity and create new possibilities.

CONCLUSION:

Through advancements in artificial intelligence, robots can now reason logically and conceptually. The past two decades have seen Artificial Intelligence approaches make significant contributions to several fields. There is no end in sight to the growing impact of AI in all of these areas. For the purposes of this article, "the field of education" will serve as a case study for the notion of artificial intelligence and the range of applications for AI. (*The Week.Com, 2016*). We are all familiar with the definition of artificial intelligence: preprogrammed intelligent behaviour in machines. Multiple experts' minds working together in a computer can do far more than any one human mind could on its own. One machine can replace several workers, and it won't get weary as humans do. The development of emotionally intelligent robots promises to put an end to human isolation. However, it also presents us with potential risks.

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