

DEVELOPMENT OF ARTIFICIAL INTELLIGENCE

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Annotation: *In this topic, we are going to provide an essay on Artificial Intelligence. This long essay on Artificial Intelligence will cover more than 1000 words, including Introduction of AI, History of AI, Advantages and disadvantages, Types of AI, Applications of AI, Challenges with AI, and Conclusion. This long essay will be helpful for students and competitive exam aspirants.*

Key words: *Artificial Intelligence, algorithm, software, machine....*

Artificial Intelligence is a combination of two words Artificial and Intelligence, which refers to man-made intelligence. Therefore, when machines are equipped with man-made intelligence to perform intelligent tasks similar to humans, it is known as Artificial Intelligence. It is all about developing intelligent machines that can simulate the human brain and work & behave like human beings.

Artificial Intelligence is a branch of computer science that emphasizes the development of intelligent machines that would think and work like humans.

Artificial Intelligence is categorized in two types based on capabilities and functionalities. Based on capabilities, AI includes Narrow AI (weak AI), General AI, and super AI. Based on functionalities, AI includes Relative Machines, limited memory, theory of mind, self-awareness.

Simply put, AI allows organizations to make better decisions, improving core business processes by increasing both the speed and accuracy of strategic decision-making processes.

Artificial intelligence (AI) is the ability of a computer or a robot controlled by a computer to do tasks that are usually done by humans because they require human intelligence and discernment.

Prominent examples of AI software used in everyday life include voice assistants, image recognition for face unlock in mobile phones, and ML-based financial fraud detection. AI software usually involves just downloading software with AI capabilities from an online store and requires no peripheral devices.

Artificial Intelligence is an approach to make a computer, a robot, or a product to think how smart human think. AI is a study of how human brain think, learn, decide and work, when it tries to solve problems. And finally this study outputs intelligent software systems.

The combination of AI and human intelligence will lead to the development of sophisticated cybersecurity innovations in the future. AI will enable an efficient battle against the rising cyberattacks and crimes. AI has a lot to offer to the transportation and manufacturing sectors.

Modern Artificial Intelligence systems can capture and 'understand' their environment in real time; they can make optimal decisions, based on multiple signals, in milliseconds. With applications ranging from self-driving cars to healthcare, AI is already changing our world.

Artificial intelligence (AI) is a wide-ranging tool that enables people to rethink how we integrate information, analyze data, and use the resulting insights to improve decision making—and already it is transforming every walk of life. In this report, Darrell West and John Allen discuss AI's application across a variety of sectors, address issues in its development, and offer recommendations for getting the most out of AI while still protecting important human values.

Most people are not very familiar with the concept of artificial intelligence (AI). As an illustration, when 1,500 senior business leaders in the United States in 2017 were asked about AI, only 17 percent said they were familiar with it.[1] A number of them were not sure what it was or how it would affect their particular companies. They understood there was considerable potential for altering business processes, but were not clear how AI could be deployed within their own organizations.

Despite its widespread lack of familiarity, AI is a technology that is transforming every walk of life. It is a wide-ranging tool that enables people to rethink how we integrate information, analyze data, and use the resulting insights to improve decisionmaking. Our hope through this comprehensive overview is to explain AI to an audience of policymakers, opinion leaders, and interested observers, and demonstrate how AI already is altering the world and raising important questions for society, the economy, and governance.

In order to maximize AI benefits, we recommend nine steps for going forward:

Encourage greater data access for researchers without compromising users' personal privacy, invest more government funding in unclassified AI research, promote new models of digital education and AI workforce development so employees have the skills needed in the 21st-century economy, create a federal AI advisory committee to make policy recommendations, engage with state and local officials so they enact effective policies, regulate broad AI principles rather than specific algorithms, take bias complaints seriously so AI does not replicate historic injustice, unfairness, or discrimination in data or algorithms, maintain mechanisms for human oversight and control, and penalize malicious AI behavior and promote cybersecurity.

Although there is no uniformly agreed upon definition, AI generally is thought to refer to "machines that respond to stimulation consistent with traditional responses from humans, given the human capacity for contemplation, judgment and intention." [3] According to researchers Shubhendu and Vijay, these software systems "make decisions which normally require [a] human level of expertise" and help people anticipate problems or deal with issues as they come up. [4] As such, they operate in an intentional, intelligent, and adaptive manner.

Artificial intelligence algorithms are designed to make decisions, often using real-time data. They are unlike passive machines that are capable only of mechanical or predetermined responses. Using sensors, digital data, or remote inputs, they combine information from a variety of different sources, analyze the material instantly, and act on the insights derived from those data. With massive improvements in storage systems, processing speeds, and analytic techniques, they are capable of tremendous sophistication in analysis and decisionmaking.

AI generally is undertaken in conjunction with machine learning and data analytics. [5] Machine learning takes data and looks for underlying trends. If it spots something that is relevant for a practical problem, software designers can take that knowledge and use it to analyze specific issues. All that is required are data that are sufficiently robust that algorithms can discern useful patterns. Data can come in the form of digital information, satellite imagery, visual information, text, or unstructured data.

Artificial intelligence refers to the simulation of human intelligence in a machine that is programmed to think like humans.

Advantages and Disadvantage of Artificial Intelligence.

Advantages of artificial intelligence

Disadvantages of artificial intelligence

1. It defines a more powerful and more useful computers

1. The implementation cost of AI is very high.

There are several advantages to AI, such as taking on tasks that are too complex for the human mind; completing tasks rapidly compared to humans; reduce errors and defects, and to discover trends and meanings in data. AI has the capacity to make life simpler, easier, and more advanced. Now, AI is only as good as the data it is trained on. This might effectively mean that it is too premature to speculate about AI as a self-sufficient and self-managing system that collects data on everything to exercise control.

To summarize, the world is on the cusp of revolutionizing many sectors through artificial intelligence and data analytics. There already are significant deployments in finance, national security, health care, criminal justice, transportation, and smart cities that have altered decisionmaking, business models, risk mitigation, and system performance. These developments are generating substantial economic and social benefits. Yet the manner in which AI systems unfold has major implications for society as a whole. It matters how policy issues are addressed, ethical conflicts are reconciled, legal realities are resolved, and how much transparency is required in AI and data analytic solutions.^[74] Human choices about software development affect the way in which decisions are made and the manner in which they are integrated into organizational routines. Exactly how these processes are executed need to be better understood because they will have substantial impact on the general public soon, and for the foreseeable future. AI may well be a revolution in human affairs, and become the single most influential human innovation in history.

To better prepare for the future society in which artificial intelligences (AI) will have much more pervasive influence on our lives, a better understanding of the difference between AI and human intelligence is necessary. Human and biological intelligence cannot be separated from the process of self-replication.

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