

## Artificial Intelligence

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### Abstract:

AI is the technology which is very helpful for human being. By using this technology the hard work of human can be escape. The artificial intelligence can be use in healthcare, education, in electronics, software development,pharmacies,games,engineering, communication and development. AI is based on science and technology on discipline like information technology, biology, phycology, mathematics etc. The main advantage of artificial intelligence is , the work will be accurate and the time can be save.

**Keywords:** Introduction to Artificial intelligence, Aims of AI ,Applications, Advantages & Disadvantages.

### Introduction:

Artificial Intelligence is a branch of Science which deals with helping machines finds solutions to complex problems in a more human-like fashion. This generally involves borrowing characteristics from human intelligence, and applying them as algorithms in a computer friendly way. A more or less flexible or efficient approach can be taken depending on the requirements established, which influences how artificial the intelligent behavior appears.AI research development, and systems design, as well as programs and policies to help ensure that these systems broadly benefit individuals and society. It considers the science, engineering, and deployment of AI-enabled computing systems. As its core activity, the Standing Committee that oversees the One Hundred Year Study forms a Study Panel every five years to assess the current state of AI.

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The term artificial intelligence (AI) refers to the ability of a digital computer or computercontrolled robot to perform tasks commonly associated with intelligent beings. Since the mid-20th century, scientists have attempted to develop a system capable of carrying out tasks perceived as requiring human intelligence.

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AI is based computer systems which include software simulate the human brains thinking of making decisions.AI have been invented to ease the human's life.

### 2. Definition of AI

Artificial Intelligence (AI) is a science and a set of computational technologies that are inspired by—but typically operate quite differently from—the ways people use their nervous systems and bodies to sense, learn, reason, and take action.“Artificial intelligence is that activity devoted to making machines intelligent, and intelligence is that quality that enables an entity to function appropriately and with foresight in its environment.”Artificial intelligence (AI), the ability of a digital computer or computercontrolled robot to perform tasks commonly associated with intelligent beings.

### Aim of AI:

The goals of AI are: - To build the computers then they can see, hear, walk, talk, and feel. A main thrust of AI is the building of computer functions normally clustered with human intelligence, such as thinking , learning, and problem solving. That“s why John McCarthy coined the term artificial intelligence at MIT in 1956.

-To Create Expert Systems –The device or machine which exhibit intelligent behavior, learn, think, demonstrate, explain, and give suggestions to its users.

-To Implement Human Intelligence in computer – Creating systems that understand, think, learn, and behave like human beings.

### Applications of AI:

AI has big role in: transportation; robots ; health ; education; commination; public safety and security, entertainment; employment.

AI in Education: From fifteen years AI is considered as it is advance in education field. Applications are used by educators and learners today. Robots have long been popular educational devices, In 1980s in MIT Lab the Lego Mind Storms kits are developed for purpose of education. Some robots like Ozobot and Cubelets teach and help learners and children's.

AI in Safety And Security:

AI is used only when necessary. And deployment is very carefully done, AI is also helpful for removing some of the bias inherent in human decision-making. The term AI is also helpful in Cybersecurity, and machine learning is making an impact. The CCTVs are deployed almost everywhere in the world today tend to be more useful for helping solve crimes and preventing them.

AI in e-commerce:

AI is providing a competitive edge to the e-commerce industry, and it's becoming more demanding within the e-commerce business. AI helps shoppers to get associated products with recommended size, color, or maybe brand.

Smarter cars:

In 2001 GPS was introduced for personal vehicle for car navigation devices and from this it is become a basic part of the transportation infrastructure. Nowadays vehicle are equipped with sensors .An average automobile in the US is predicted to have seventy sensors including gyroscopes, accelerometers, ambient light sensors, and many sensors are used. Automobiles built 2000 sensor for the better quality and service of cars.

AI in social media:

Social Media sites like Facebook, Twitter, and Snapchat contain billions of user profiles, which require to be stored and managed during a very efficient way. AI can organize and manage massive amounts of knowledge. AI can analyze many data to spot the newest trends, hashtag, and requirement of various users.

### **Advantages of Artificial intelligence:**

#### **1) Reduction in Human Error:**

The phrase "**human error**" was born because humans make mistakes from time to time. Computers, however, do not make these mistakes if they are programmed properly. With Artificial intelligence, the decisions are taken from the previously gathered information applying a certain set of algorithms. So errors are reduced and the chance of reaching accuracy with a greater degree of precision is a possibility.

**Example:** In Weather Forecasting using AI they have reduced the majority of human error.

#### **2) Takes risks instead of Humans:**

This is one of the biggest advantages of Artificial intelligence. We can overcome many risky limitations of humans by developing an AI Robot which in turn can do the risky things for us. Let it be going to mars, defuse a bomb, explore the deepest parts of oceans, mining for coal and oil, it can be used effectively in any kind of natural or man-made disasters.

**Example:** Have you heard about the **Chernobyl** nuclear power plant explosion in Ukraine? At that time there were no AI-powered robots that can help us to minimize the effect of radiation by controlling the fire in early stages, as any human went close to the core was dead in a matter of minutes. They eventually poured sand and boron from helicopters from a mere distance.

AI Robots can be used in such situations where intervention can be hazardous.

#### **3) Available 24x7:**

An Average human will work for 4–6 hours a day excluding the breaks. Humans are built in such a way to get some time out for refreshing themselves and get ready for a new day of work and they even have weekly offed to stay intact with their work-life and personal life. But using AI we can make machines work 24x7 without any breaks and they don't even get bored, unlike humans.

**Example:** Educational Institutes and Helpline centers are getting many queries and issues which can be handled effectively using AI.

#### **4) Helping in Repetitive Jobs:**

In our day-to-day work, we will be performing many repetitive works like sending a thanking mail, verifying certain documents for errors and many more things. Using artificial intelligence we can productively automate these mundane tasks and can even remove “**boring**” tasks for humans and free them up to be increasingly creative.

**Example:** In banks, we often see many verifications of documents to get a loan which is a repetitive task for the owner of the bank. Using AI Cognitive Automation the owner can speed up the process of verifying the documents by which both the customers and the owner will be benefited.

#### **5) Digital Assistance:**

Some of the highly advanced organizations use digital assistants to interact with users which saves the need for human resources. The digital assistants also used in many websites to provide things that users want. We can chat with them about what we are looking for. Some chatbots are designed in such a way that it's become hard to determine that we're chatting with a chatbot or a human being.

**Example:** We all know that organizations have a customer support team that needs to clarify the doubts and queries of the customers. Using AI the organizations can set up a Voice bot or Chatbot which can help customers with all their queries. We can see many organizations already started using them on their websites and mobile applications.

#### **6) Faster Decisions:**

Using AI alongside other technologies we can make machines take decisions faster than a human and carry out actions quicker. While taking a decision human will analyze many factors both emotionally and practically but AI-powered machine works on what it is programmed and delivers the results in a faster way.

**Example:** We all have played Chess games in Windows. It is nearly impossible to beat CPU in the hard mode because of the AI behind that game. It will take the best possible step in a very short time according to the algorithms used behind it.

#### **7) Daily Applications:**

Daily applications such as Apple's **Siri**, Window's **Cortana**, Google's **OK Google** are frequently used in our daily routine whether it is for searching a location, taking a selfie, making a phone call, replying to a mail and many more.

**Example:** Around 20 years ago, when we are planning to go somewhere we used to ask a person who already went there for the directions. But now all we have to do is say “**OK Google** where is Visakhapatnam”. It will show you Visakhapatnam's location on google map and the best path between you and Visakhapatnam.

#### **8) New Inventions:**

AI is powering many inventions in almost every domain which will help humans solve the majority of complex problems.

**Example:** Recently doctors can predict breast cancer in the woman at earlier stages using advanced AI-based technologies.

Disadvantage of AI

#### **1) High Costs of Creation:**

As AI is updating every day the hardware and software need to get updated with time to meet the latest requirements. Machines need repairing and maintenance which need plenty of costs. It's creation requires huge costs as they are very complex machines.

#### **2) Making Humans Lazy:**

AI is making humans lazy with its applications automating the majority of the work. Humans tend to get **addicted** to these inventions which can cause a problem to future generations.

#### **3) Unemployment:**

As AI is replacing the majority of the repetitive tasks and other works with robots, human interference is becoming less which will cause a major problem in the employment standards. Every organization is looking to replace the minimum qualified individuals with AI robots which can do similar work with more efficiency.

#### **4) No Emotions:**

There is no doubt that machines are much better when it comes to working efficiently but they cannot replace the human connection that makes the team. Machines cannot develop a bond with humans which is an essential attribute when comes to Team Management.

**5) Lacking Out of Box Thinking:**

Machines can perform only those tasks which they are designed or programmed to do, anything out of that they tend to crash or give irrelevant outputs which could be a major backdrop.

**SUMMARY:**

These are some advantages and disadvantages of Artificial Intelligence. Every new invention or breakthrough will have both, but we as humans need to take care of that and use the positive sides of the invention to create a better world. Artificial intelligence has massive potential advantages. The key for humans will ensure the “**rise of the robots**” doesn’t get out of hand. Some people also say that Artificial intelligence can destroy human civilization if it goes into the wrong hands. But still, none of the AI applications made at that scale that can destroy or enslave humanity.

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