Latest advancement in the Field of AI

***Abstract - Artificial intelligence (AI) is the emulation of human intellect in devices intended to act and think like people. It includes a variety of technologies, such as robots, computer vision, natural language processing, machine learning, and deep learning. AI's primary objective is to develop machines that are capable of doing tasks like speech recognition, decision-making, and pattern identification that generally need human intellect. By enabling computers to analyze massive quantities of data and make judgements more correctly and quickly than humans, artificial intelligence (AI) has the potential to transform a number of industries, including healthcare, banking, and transportation.***

***Keyword –*** Narrow AI, Strong AI, Tensor Flow, Google Lens

***What basically is Artificial Intelligence (AI)?***

People have always been, now are, and will always be ravenous for inventions that will vastly improve and simplify their lives. I've always been amazed by what a human mind is capable of. Artificial intelligence, or AI, is one such significant invention. Machine intelligence would be artificial. AI, then, is just a word for all intelligent devices.

***Basics of AI***

Data analysis is the core purpose of AI algorithms. They gain up knowledge through observation. In the same manner, machines can learn. The machines are fed enormous amounts of data, and they observe and learn, observe and learn, and then observe and learn some more. In other words, by seeing and imitating people, robots may learn to think like humans.

***Types of AI***

AI may be roughly divided into two categories:

1. **Narrow AI:** Another name for this kind of AI is "weak AI." Narrow AI often performs a single job with extraordinarily high efficiency, simulating human intelligence.
2. **Strong AI:** Strong AI is sometimes known as "general AI." Where a computer and a person are concerned, there is no distinction to be made.

***Why AI***

* The amount of data in the world today is so enormous that people are unable to comprehend, evaluate, and make judgements using even a small portion of the data. This is the reason we are working to create AI, or robots that can outperform us.
* Repetitive learning is a significant trait that AI computers have that we do not.
* Machines do jobs with a remarkably high degree of precision. Machines are also capable of taking risks in place of people.

***The Risks AI Presents***

Despite the many benefits of AI, it is possible that they will one day surpass humans. Future hazards or concerns posed by AI include the following:

* **AI is capable of terrible things:** AI is employed in many different applications, including the creation of self-contained weaponry and missiles. This has the potential to be quite damaging in the wrong hands. AI warfare might also result from improper AI use.
* **AI may one day surpass humans:** Artificial intelligence (AI) has the potential to one day surpass humans because we are the most intelligent species to have ever existed. A threat to humanity might arise if we create an AI that is smarter than we are.
* **AI is trained to accomplish something, but it comes up with a damaging way to do it:** It could be incredibly challenging to feed the machines with what we have in mind. We must be extremely cautious when matching the AI's objectives to our own. As an illustration, if you order a self-driving car to transport you as quickly as possible to the airport, it may go above the speed limit, make you queasy from the high speed, and may even get you into legal trouble from the violation of the speed restriction.

***Biggest Advancements in AI***

1. **AI Artwork:**

The first piece of artificial intelligence (AI)-generated art was sold at a global auction in October 2018, indicating the entry of AI into the art industry. The portrait was produced by a Paris-based group researching the relationship between art and AI, and it was sold at the prestigious Christie's auction house for $432,500. (Almost 45 times its estimate).

1. **Tensor Flow**

2015 saw the initial public release of Tensor Flow, the deep-learning package that Google utilizes in its services (search engines, translation, recommendations, etc.). Tensor Flow represents the significance of making machine learning and artificial intelligence (AI) accessible to everyone for any purpose since it is open source, which means that anybody may download it and use it for free.

1. **AI Glass**

Artificially intelligent glass with the capacity to identify pictures without a power supply was developed by certain scientists in July 2019. The creation of facial ID-locking security software on your phone without using the battery is one of the uses of this AI "smart glass." Potentially, the glass may produce a biometric lock that would be enduring and not require a network or power supply.

1. **Deep Density Displacement Model**

With the creation of the Deep Density Displacement Model in 2019, artificial intelligence in astrophysics made significant strides. The creation of complicated simulations typically took minutes, but in June, astrophysicists were able to employ AI to produce 3D models of the cosmos for the first time.

1. **AI in Mobile Phones**

In September 2017, the Chinese technology giant Huawei announced one of the first smartphones with AI capabilities, making it the first business to center its primary selling point for a smartphone on AI. The first Mate 10 was a step towards the future of mobile AI, even if Huawei has since released other versions of phones featuring the technology.

1. **OpenAI language model**

In February 2019, the artificial intelligence research firm OpenAI announced a text-generating AI system. Shortly after, a restricted version of the language model was made publically available, and it disproved the theory that AI was incapable of original thought.

1. **Amazon**

When the Amazon Echo and Alexa initially debuted in November 2014, they revolutionized the smart home artificial intelligence industry. The Echo's far-field microphone, which can pick up sound from further away when users use the wake word (often "Alexa") to awaken the virtual assistant, is one of its benefits over similar AI assistant services.

1. **Space Exploration**

AI has the potential to greatly expand what we now understand about space exploration. We may end up with the same data—if not more—from AI-only missions without putting human astronauts at danger.

1. **Robo - Humans**

Though mind-controlled robotic limbs are now being used to treat amputee patients, someday "transhumanism"—where humans update themselves with AI-assisted components to enhance their motor abilities, IQ, and other qualities—may become the norm. It's clear that there are ethical ambiguities here, but it's a problem that we may have to deal with in the near future.

1. **Improved Medical Care**

AI software and hardware may increase medical treatment in a variety of ways, from AI-assisted robotic surgery, which is already being used all over the world, to patient advanced scanning, analysis, and diagnosis. However, data analysis can be just as crucial as surgery since AIs might use a patient's current health to anticipate their future health concerns. Doctors already do this, but with help from increasingly intelligent AI, the data might become ever more precise.

***What will AI look like in the future?***

* Machine learning, natural language processing, and computer vision are projected to continue to progress in the future of artificial intelligence (AI). This will allow AI systems to become more competent and incorporated into a variety of applications and sectors.
* Healthcare, banking, transportation, and customer service are a few possible development sectors for AI. Additionally, there may be an increase in the use of AI in more delicate contexts, such as hiring, education, and criminal justice, raising issues of ethics and society that need to be addressed.
* In order to make sure that AI systems are open, trustworthy, and secure to use, it is also anticipated that there will be more research and development in areas like explainable AI, trustworthy AI, and AI safety.

***Conclusion***

The enormous potential of artificial intelligence to transform many different businesses and facets of our daily lives. Tasks can be automated, data-driven judgements can be made, and processes can be improved in ways that weren't previously feasible. To guarantee that AI is created and applied ethically, it is crucial to take into account the ethical and societal consequences of the technology. The way AI is incorporated into society and the decisions we make about its implementation and regulation will ultimately determine its influence.

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