Artificial Intelligence in today's World

Technology has entered every area of our lives, whether it be unlocking our phones, online purchasing, listening to music or even cooking. However, if one contemplates a technology which surpasses all others in the era, there comes AI. In fact, this amazing technology has progressed over the years to acquire remarkable capabilities where some are even beyond ordinary forecast. Whether it's social media, Google search, emails, online banking, or virtual personal assistants like Apple's Siri and Amazon's Alexa, AI is everywhere!

What exactly is AI?

AI is commonly regarded as a technology. However, many experts prefer to identify it as a science than a technology. This is because it engages with a wide range of statistical computational techniques including advanced analysis strategies to deal with organized and sometimes unorganized or unstructured data. Additionally, it is best to think of AI as an all-encompassing "umbrella" term that describes a variety of technologies which allows machines to simulate human intellect. These technologies in fact include machine learning, deep learning, computer vision, natural language processing, and many others.

How did AI evolve?

Despite its widespread use today, the roots of AI go far back to the ww2 era. In fact, Alan Turing a well-known English computer scientist is considered to be the first prominent figure to lay the stepping stone for AI. The Turing test, proposed by Alan Turing, is hence regarded as the most remarkable experiment to evaluate Artificial Intelligence. Here, determining if a machine can think and make judgments as logically and intelligently as a human being is the key goal. In fact, an assessor will determine which response on the test is from a human and which is from a machine. So, if a machine would be successful at the event of being indistinguishable from a human being, it would pass the test. Even though the original Turing Test framework is modified to various versions, it still applies to many AI initiatives as of today.

Moving forward, John McCarthy an American computer scientist is profoundly credited as the father of AI. In his proposal for the Dartmouth Conference, the first-ever AI conference held in 1956, he coined the term Artificial Intelligence. Also, among his significant contributions to the field, inventing the Lisp computer language is often highlighted. In fact, this language which became the standard AI programming language is still being used today.

However, this isn't everything about the AI timeline. It still entails a long story, such as the invention of the first industrial robot Unimate by George Devol in 1961, the chatbot Eliza by Joseph Wiezenbaum in 1964 up to the advent of the modern-day Siri and IBM Watson in 2011.

Has AI impacted modern business?

Nowadays, AI is indubitably in the game of changing the way how businesses operate and is widely used in many global industries such as manufacturing, retailing, healthcare, education, agriculture and many more to enhance productivity with enhanced accuracy, end-to-end efficiency, and most importantly with its large data processing capabilities.

 OREL IT CEO Dr. Upendra Pieris

In general, the utility of AI in industries such as production, manufacturing, and even supply chain management is mostly for the goal of streamlining long-held operations by entirely automating complex jobs, particularly those requiring less manpower for maintenance. Within these industries, AI also enables organizations to swiftly change production plans or adjust material flows in ways that can have a significant impact on the final production. Especially, AI's capacity to make key business insights easily available is another way which it could directly relate to enhanced employee productivity.

AI also has placed a strong foothold in industries such as retailing and e-commerce with enormous uses.

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For example, AI assists merchants in improving demand projections, price decisions, and product positioning. Despite the fact that current customers have complex expectations from suppliers, AI's extraordinary ability allows them to be connected with the required items, in the correct place, at the appropriate time. Also, businesses may easily hold the optimal quantity of stock based on consumer demand using predictive analytics, which is one of the AI's most significant functions. Last but not least, AI indeed facilitates the collection of data from online platforms in order to design and develop better e-commerce strategies.

Furthermore, with the onset of the global pandemic, we saw how AI in the healthcare field played a significant role in thriving the society. Many countries deployed AI-powered robots to assist doctors, nurses, and other healthcare professionals in their daily duties to decrease contamination and the spread of Covid-19. AI was also used extensively to predict and track the virus's spread during the time with the collected statistics. However, assuming that AI's utility in the healthcare sector will solely be during such disasters is an underestimation. This is because, even under typical circumstances, AI can improve preventive care and quality of patients' lives by providing more accurate diagnoses and better treatment plans.

Going further, even the most inconceivable domains benefit greatly from AI and agriculture is one such sector. For instance, Precision agriculture, or the use of artificial intelligence (AI) technologies to increase overall harvest quality and accuracy, is a well-known idea nowadays. Also with powerful AI sensors, detecting the exact position of weeds to apply herbicides has become

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absolutely simple. This has placed a profound impact on decreasing environmental pollution, health risks, and even the huge prices, which farmers had to bear for chemicals earlier. Apart from that, AI is also useful in detecting plant diseases, pests, and agricultural nutrition deficiencies.

In fact, according to a research by the McKinsey Global Institute on the State of Artificial Intelligence in 2020, which involved over 2,300 global participants, businesses are primarily using AI as a tool for value creation. Additionally, 22% of the participants had claimed that at least 5% of their company's profits can be attributed to the adoption of AI through lowered costs across a variety of areas such as talent management and automation.

Application of AI in Sri Lanka

When it comes to the Sri Lankan scenario, the use of AI technology is still in a booming phase. Yet again, there exists a number of accolaed tech firms, who still generates a significant foreign revenue through a considerable number of AI-based IT exports. However, there is much more hope we can hold for AI-based innovations in Sri Lanka, thanks to the ongoing support provided by the Srilankan government to the local IT industry through initiatives such as provisioning of resources for Spark hubs, knowledge sharing platforms, encouragement for startups and similar endeavors.

How do we embrace Artificial Intelligence amid bad speculations about it?

BY SHEAIN FERNANDOPULLE

With all the hype around Artificial Intelligence (AI), it is apparent that AI is making an enormous impact on our everyday lives. According to a study by Statista, the global AI market is set to grow up to 54 percent every single year. But what exactly is AI? Will it really serve good to mankind in the future?
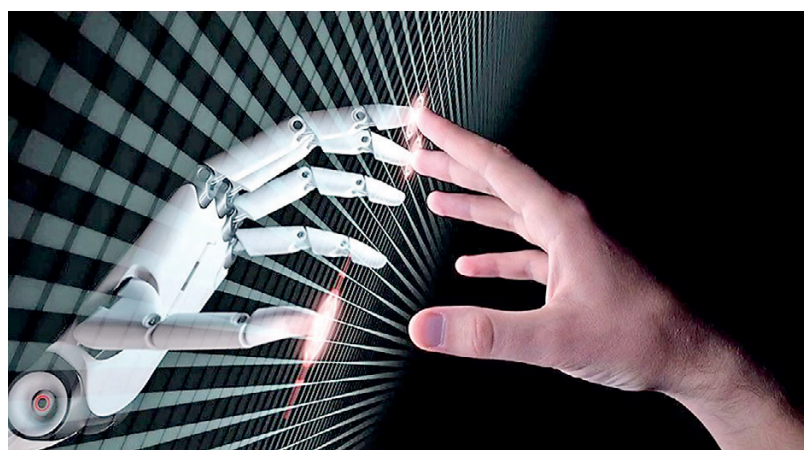
Well, in a nutshell, AI refers to the ability of a computer or machine to mimic the competencies of the human mind, which often learns from previous experiences to understand and respond to language, decisions, and problems. These AI capabilities, such as computer vision and conversational interfaces, have become embedded throughout various industries' standard business processes. The industries that have become prominent for AI adoption in organizations include high tech and telecommunications, financial services, and healthcare and pharmaceutical.

There are tons of pros and cons of AI which need to be discussed given current trends in the world.

One of the biggest advantages of Artificial Intelligence is that it can significantly reduce errors and increase accuracy and precision. The decisions taken by AI in every step is decided by information previously gathered and a certain set of algorithms. When programmed properly, these errors can be reduced to null. Another big advantage of AI is that humans can overcome many risks by letting AI robots do them for us. Whether it be defusing a bomb, going to space, or exploring the deepest parts of oceans, machines with metal bodies are resistant in nature and can survive unfriendly atmospheres. Moreover, they can provide accurate work with greater responsibility and not wear out easily.

Besides, there are many studies that show humans are productive only about 3 to 4 hours in a day. Humans also need breaks and time offs to balance their work life and personal life. But AI can work endlessly without breaks. They think much faster than humans and perform multiple tasks at a time with accurate results. They can even handle tedious repetitive jobs easily with the help of AI algorithms.

In practically every field, AI is the driving force behind numerous innovations that will aid humans in resolving the majority of challenging

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issues. For instance, recent advances in AI-based technologies have allowed doctors to detect breast cancer in a woman at an earlier stage.

Moreover, some of the most technologically advanced companies engage with users using digital assistants, which eliminates the need for human personnel. Many websites utilize digital assistants to deliver user-requested content. We can discuss our search with them in conversation. Some chatbots are built in a way that makes it difficult to tell whether we are conversing with a human or a chatbot.

Furthermore, Human beings are driven by emotions, whether we like it or not. AI on the other hand, is devoid of emotions and highly practical and rational in its approach. A huge advantage of Artificial Intelligence is that it doesn't have any biased views, which ensures more accurate decision-making.

Today, our everyday lives are entirely dependent on mobile devices and the internet. We utilize a variety of apps, including Google Maps, Alexa, Siri, Cortana on Windows, OK Google, taking selfies, making calls, responding to emails, etc. With the use of various AI-based techniques, we can also anticipate today's weather and the days ahead.

Example: About 20 years ago, you must have asked someone who had already been there for instructions when you were planning a trip. All you need to do now is ask Google where Bangalore is. The best route between you and Bangalore will be displayed, along with Bangalore's location, on a Google map.

On the other hand, let us now look at what are the main disadvantages that AI holds. According to a recent research paper by scientists at Google and the University of Oxford, AI can eliminate humanity.

In the paper which was published in the journal AI Magazine, the team — comprised of DeepMind senior scientist Marcus Hutter and Oxford researchers Michael Cohen and Michael Osborne concluded that the answer to the long-standing question of whether a super-intelligent AI may go rogue and wipe out humans was that it was "likely".

"Under the conditions we have identified, our conclusion is much stronger than that of any previous publication, an existential catastrophe is not just possible, but likely," Cohen tweeted earlier this month.