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STONG A.I VS WEAK A.I

Ever since the 1950s people have been talking about the idea of artificial intelligence and the power it holds to advance technology but engineers have been having ideas about machine learning since the 1700s. There was a guy named Wolfgang Von Kempelen who created a chess-playing automatic machine. The machine worked with cogs and clockwork that followed the opponent's move and made a move that would be good enough to challenge anyone. But in 1957 it changed as AI conversations started growing and becoming reality. Computers started to hold information and became more available around. Machine learning became more of a reality than an idea. The US government wanted to use machines to translate spoken language using big data groups at high speeds.

Talking about Artificial Intelligence now in the present it is now growing at an expedient rate. Recently ChatGpt came out late last year and has been growing at an incredible rate. When it first came out people were testing its capabilities which were first very limited. It could not run code or create PowerPoint, it was comparable to a quick Google search. But over the months ChatGpt was being put to the test and was showing incredible results. It passed the BAR exam and also made it to the final round of a software engineer interview which one week later it passed all SWE interview rounds. There are many examples of strong A.I and weak A.I and the uses for them.

The biggest difference between Strong AI and Weak AI is that Strong AI is constantly learning and growing when more inputs are added to it while weak AI does not learn and grow with the number of tasks it gets done but instead, it may repeat the same results or steps unless it is changed. Strong AI can almost think like a human and perform the correct task almost all the

time and when it does make a mistake it will learn from it and use that information the next time. Weak AI can still outperform humans on the specific tasks it is designed for but its constraints are even tighter than what humans are. Another term to call Weak AI is known as Narrow AI. Narrow AI is used all around the world and people use it all the time and they might not even know it. For example, our smartphone has to make weak AI in it. One big one is our smartphone voice assistant also known as Siri. there are over one billion iPhones in the market and mostly all of them have the feature Siri. The story of Siri starts in 1993 when it was only an idea. It was not first created at Apple but a small company and they were reached by Steve Jobs to buy Siri from them. The first prototype was actually launched on the iOS app store and not just a part of the phone itself. " Steve had convinced them that their impact could be global if they partnered with Apple. And he was right.[1] Within months, and seemingly out of nowhere, Siri hit the devices of hundreds of millions of people across the globe." After this Siri began to grow and the developers at Apple began to give Siris updates and understand more about what different types of questions its being asked. Siri may be a weak AI but it's still growing and is still getting new updates which will help it improve more. This same weak AI is also being used with Amazon Alexa and Google Assistant.

Another example of Weak AI is the algorithms that streaming services use to get everyone their own generated recommendations list on Apple Music, Spotify, and YouTube. This algorithm analyzes the user's behavior with their preferences and their history data to get the best suggestion for music, movies, and TV shows. As the user's preferences change over time the algorithm changes and gives a new list of music and shows. "The algorithm constructs user profiles that encompass their musical taste and also consider their cultural affinities. These

profiles serve as the foundation for providing culturally fitting recommendations."[2] When the user clicks on music and then listens to them for a long time or the whole playlist the Algorithm will recommend music from the same author or of the same type of music. This type of algorithm can be traced to the late 20th century with early systems. This technique of filtering out small behaviors and finding the right type of list took time to evolve and it is still evolving over time to get more precise in the recommendation of music, TV shows, and movies. By understanding the behavior of the user they will be able to find the right list for them. Talking about Apple Music it follows the same history as well. In the year 2000 iTunes was announced and was added to iPods which let the user purchase new music of all types and listen to them

There are also many Strong AI already created in the world. One example of this would be self-driving cars. The conversation about self-driving cars has been around as long as cars were first invented. The idea of automating something such as a car would be such a big break though in technology. Many people around the world use cars to go from one place to another and they all have to drive it manually. The first self-driving car was created and tested in 1980 by Carnegie Mellon University Navlab but at that time technology was limited on how much testing could be done so they stopped for some time. One big advancement was in 2004 when the Defense Advanced Research Project created a competition for autonomous vehicles to navigate challenging courses. The first year on cars finished the course but it did spark interest and advancements in the field. In 2009 google announced its self-driving car project and with that many other big companies wanted to join in the self-driving car race. In 2014 Tesla released its first vehicle with the hardware to be able to self-driving to the public and then in 2015 he released the software to have cars drive by themselves. Even now Tesla is trying to advance the

idea of self-driving cars for people. “ The cars rely on a combination of hardware and software ti so, Eight cameras capture real-time footage of activity surrounding the car to assess hazards like pedestrians and other cars”[3] This shows how Teslas is still advancing their vehicles to make sure the cars are more safe and efficient to use.

Another example of Strong AI is algorithm trading. Many people trade in the stock market or do some type of exchange. Having the power to have AI to make the trade for you would be extremely beneficial. Trading Algorithm has speed and efficiency which can analyze the conditions of the market and execute trades faster than humans. The AI has more knowledge in the market which can help Identify potential trading opportunities. It can follow different datasets and trends that can lead to big outcomes. The AI has a vast veracity of strategies that humans can play all at once. It can use multiple strategies at the same time without delay also it has a better risk management system which will help with keeping the loss percentage down. With the AI it has machine learning involved as well which means it will learn from its mistakes and improve on them. “ Algorithmic trading makes use of complex formulas, combined with mathematical models and human oversight, to make decisions to buy or sell financial securities on an exchange.”[4] Algorithmic trading is still growing as the market keeps changing so will the Algorithm and it will adapt to the changes.

When comparing strong AI vs weak AI its no question that someone would go with the stronger one. But that may not always be the best choice. It really depends on what they are trying to do and also many other factors. Strong AI does have the ability to learn and adapt and strong problem-solving skills but there are some cons that come with it. Some are the ethical part

of it when making important decisions in people's lives. Is it better for a computer to make the decision than a human? People started asking questions like those. Also, as strong AI keeps growing it will affect jobs that humans can find. Machines can take over tasks traditionally done by humans easily. When talking about weak AI it is more cost-effective when trying to get a hand on one. There is more weak AI around and they are easier to implement to a task or job. But the cons of them are the lack of adaptability which can completely effect their use. When something changes in the task they were given the AI has to manually be changed to be able to do the task again. Also, it has a limited scope meaning that it only does what it is coded to do and nothing more. Does not have a real understanding of what is happening and it is solo relying on the data to move forward.

Overall artificial intelligence is only growing and is not slowing down. ChatGbt is one example that came out this past year which was open to the public for anyone to use. If more AI comes out for the public to use soon everyone will have a strong AI that does the small tasks. Also, more companies may app AI to their devices as a built-in fissure which will surpass what we have right now.

References

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