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How Cognitive Technology Is Better Than AI?

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Abstract: *Today computers can do work by using human intelligence by automate tasks that require to think such as recognizing handwriting, identifying faces or cognitive skills such as reasoning from information. Technologies that are able to perform such tasks are known as cognitive technologies. Cognitive technologies helps in extending the power of IT sector in terms of speed, cost, and quality from the traditional approaches performed by the human brains. Over the years cognitive technologies will make effect drastically in growing the organizations. But the leaders of the organization need to understand how and where to invest in applying cognitive technologies for better performance and competitive advantage. In the paper, we have discussed about what is cognitive technology, how it's better than AI, what are various examples and technologies of cognitive technologies.*

Keywords: Cognitive technology, IT, human intelligence, cognitive skills.

I. INTRODUCTION

Cognitive technology typically behaves like human brain through various means, including natural language processing, data mining and patter recognition.

In coming years there will huge change coming in the way humans interact with the technology.

Cognitive Computing (CC) is an emerging paradigm of intelligent computing methodologies and systems based on cognitive informatics that implements computational intelligence by autonomous inferences and perceptions mimicking the mechanisms of the brain [1].

Cognitive technology is the subset of artificial intelligence. The major innovation that has become symbolic of cognitive technology is IBM's Watson supercomputer, which has a processing rate of 80 teraflops that it uses to essentially "think" as well as (or better than) a human brain. Cognitive computing is an emerging paradigm of intelligent computing methodologies [2].

We are using cognitive technology in business sector also these days. The most common example are –

- Recommendation feature of the Netflix online movie rental service, which uses machine learning to predict which movies a customer will prefer. This feature has had a significant impact on customers' use of the service; it accounts for as much as 75 percent of Netflix usage.

- Audi is integrating speech recognition technology into some of their cars to enhance the service and ease the natural communication with infotainment and navigation systems.

- Dominos has introduced a function in its mobile app that lets customers place orders by voice; a virtual character named "Dom," who speaks with a computer-generated voice, guides customers through the process.

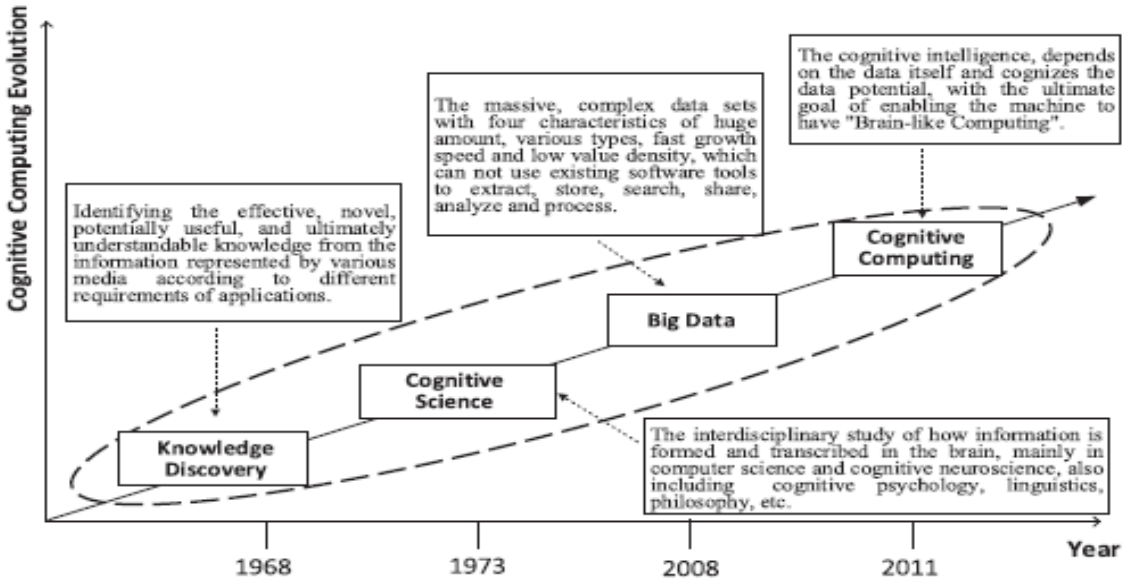

***Figure 1**: Evolution of Cognitive Computing [3]*

II. TECHNOLOGIES FOR COGNITIVE COMPUTING

Some software applications analyze raw network data to spot an irregularity, while others focus on user/asset/entity behavior to detect patterns that deviate from normal [4].

- **Big Data Analytics**

Big data analysis is a term which means getting meaningful insights from a big amount of data that we gathered from various platforms like social media, transactions records and e-commerce sites. It helps predicts the trends though the data provided. This analytics are widely used in business enterprising.

- **Machine Learning**

Machine learning is the application of artificial intelligence. It makes the machine works smartly and efficiently through programming done by the humans. It can perform tasks accurately better than a human.

- **Natural Language Processing**

Natural Language processing is a component of artificial intelligence. It is used to process the language spoken by the human and then detect the language for further processing. Some examples are google assistant, amazon alexa where we talk and it works accordingly.

III. IS COGNITIVE TECHNOLOGY BETTER THAN AI?

Cognitive computing is a synonym to artificial intelligence. These two can be used interchangeably. But there lies a major difference between the two.Cognitive computing is a subset of AI and although the underlying purpose for both these technologies is to simplify tasks, the difference lies in the way they approach tasks. AI is used to augment human thinking and solve complex problems. It concentrates more on providing accurate results. : Now, as we are dealing with intelligence in machines using artificial intelligence, the matter of contention is how to blend the same in artificial agents [5]. Cognitive thinking, on the other hand, aims at mimicking human behaviour and adapting to human reasoning, aiming to solve complex problems in a manner similar to the way humans would solve them. The difference is subtle but real.

Cognitive technology is better than artificial intelligence since it let the human makes the final decision. It provides number of solutions to a problem and give the humans to make the decision.

In this way both technology and human can work together whereas in artificial intelligence it only works towards making accurate decision rather than making a human desirable solution.

IV. REAL-BASED EXAMPLES OF COGNITIVE COMPUTING

The process of building applications has been a journey and it varies depending on one's application requirements and purpose [6]. Today the entrepreneurs are more focused on implementing cognitive computing in their products for higher growth. As the products which are based on machine learning and AI requires improvement which can be done by cognitive computing solutions.

- **Vantagepoint AI (smart way of trading in stock market)**

Vantagepoint AI is the first company to develop a software in the world to provide ease for investors , traders choosing a well-performing stock. With the help of this software investors feel more confident enough to invest as Vantagepoint provides trend forecasts up to 3 days in advance with up to 86% accuracy.

- **Welltok (accuracy in medical advises)**

As we know on internet we have enormous information about health sector and regular updated blogs on new diseases. This contradicts when people matches there symptoms from the information. So the solution for this is Welltok software. Welltok processes vast number of data and provide the accurate answer to the question asked by the subscriber.

- **LifeLearn(medical decision for veterinarians)**

Cognitive technology isn't just providing solutions for human medical sectors but also to veterinarians for their medical decisions i.e. SOFIE (IBM Watson platform)- This AI helps in providing most current, credible and trusted veterinary resources in animal health sector.

- **Edge Up Sports(helps coaches , football lovers to be informed)**

Edge up Sports is basically helping fantasy football players by gathering all such information like social media trends (likes ,comments), weather report, news reports to make them aware of the in future decisions taken in the field of football [7].

V. CONCLUSION

In this fast growing IT world, Humans want things to be accurate and according to their need. Cognitive computing helps them to do their day to day task efficiently .it makes them more smarter by narrowing down the best result possible for humans so they can choose the appropriate options from the list they get using cognitive technologies. It works on both human brain and artificial intelligence. The decision computing makes are more accurate, aware, smart.The need of cognitive computing will only grow with times and both the computer and human brain can work together to create a better world with better inventions for the future generations to come.

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