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ARTIFICIAL INTELLIGENCE (AI) PROBLEMS

When most people hear the term artificial intelligence, the first thing they usually think of is robots. That's because big-budget films and novels weave stories about human-like machines that wreak havoc on Earth. But nothing could be further from the truth.

Artificial intelligence is based on the principle that human intelligence can be defined in a way that a machine can easily simulate it and execute tasks, from the most simple to those that are even more complex. The goals of artificial intelligence are learning, reasoning, and perception.

Its applications are endless. In the healthcare industry it is used for dosing drugs and different treatment in patients as well as for surgical procedures in the operating room. Other examples include computers that play chess and self-driving cars. Each of these machines must weigh the consequences of any action they take, as each action will impact the end result. In chess, the end result is winning the game. For self-driving cars, the computer system must account for all external data and compute it to act in a way that prevents a collision. In the financial industry it is used to detect and flag activity in banking and finance, such as unusual debit card usage and large account deposits etc. Computers essentially function by following sets of programming instructions, and artificial intelligence is a field that is helping transform this process into something much more dynamic where the programs can find ways to learn on their own without having to receive new instructions all the time.

In spite of artificial intelligence continues to bring incremental benefits to human life, it has various problems which include safety, trust, computation power, job loss concern, etc. Let's study them more precisely.

As the artificial intelligence becomes smarter by the day even the high paid, high skill workers, become more vulnerable to job losses as, given the high cost of skilled workers, the companies get better margins by automating their work.

There have been various instances where artificial intelligence has gone wrong when Twitter Chabot started spewing abusive and Pro-Nazi sentiments and in other instance when Facebook AI bots started interacting with each other in a language no one else would understand, ultimately leading to the project being shut down.

There are grave concerns about artificial intelligence doing something harmful to humankind. The case in point is autonomous weapons which can be programmed to kill other humans.

There are several applications where artificial intelligence operates as a black box. For example, in high-frequency trading even the program developers don't have a good understanding of the basis on which it executed the trade. Some more striking examples include Amazon AI-based algorithm for same-day delivery which was

inadvertently biased against black neighborhood, another example was Correctional Offender Management Profiling for Alternative Sanctions (COMPAS) where the artificial intelligence algorithm while profiling suspects was biased against the black community.

Artificial intelligence algorithm involves analyzing the humongous amount of data that require an immense amount of computational power. So far the problem was dealt with with the help of Cloud Computing and Parallel Processing. However, as the amount of data increases and more complex deep learning algorithm comes in the mainstream, the present-day computational power will not be enough to cater to the complex requirement. We will need more storage and computational power which can handle crunching exabytes and Zettabytes of data.

Quantum computing which is based on concepts of Quantum theory might be the answer to solving computation power challenges. Quantum computing is 100 Million times faster than a normal computer we use at home. Although it is currently in the research and experimental stage. As per an estimate by different experts, we can see its mainstream implementation in the next 10-15 years.

In computer science and the field of computers, the word artificial intelligence has been playing a very prominent role and off late this term has been gaining much more popular due to the recent advances in the field of artificial intelligence and machine learning. Machine learning is that sphere of artificial intelligence where the machines are responsible to do the end to end daily chores and are believed to be smarter than humans. Robotics and integration with the IoT devices have made machines think and work on a whole new level where they are outsmarting humans with their cognitive abilities and smartness. They have been known to learn, adapt and perform in a much faster way than what humans are supposed and programmed to do. In this article, we are going to read about the vast importance of artificial intelligence.

REFERENCES

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