

Use of Artificial Intelligence in Marketing, Agriculture, Health Care and Gaming

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Abstract— AI is the biggest business opportunity of the next decade. [AI] is going to change the world more than anything in the history of mankind. More than electricity. Artificial intelligence is impacting the future of virtually every industry and every human being. Artificial intelligence has acted as the main driver of emerging technologies like big data, robotics and IoT, and it will continue to act as a technological innovator for the foreseeable future. In recent years, science and technology have developed rapidly. Computer network technology has changed people's lifestyles, provided convenience for human life and developed toward the direction of artificial intelligence. Artificial intelligence technology improves the performance and effectiveness of computer network technology. AI artificial intelligence has work to reduce work of the human life in many areas. Artificial intelligence used to solve the problems of different areas it may be science & technology, finance, medical, environmental, marketing, banking. This article explore how AI is helping our planet and at last benefiting humankind and also it describes Artificial Intelligence applications and how AI has impacted various fields.

Keywords: Artificial Intelligence, Robotics, big data, data science, IoT, business, Security

I. INTRODUCTION

Artificial Intelligence is an ability to design smart machines or to develop self-learning software applications that imitate the traits of the human mind like reasoning, problem-solving, planning, optimal decision making, sensory perceptions etc. The capacity of artificial intelligent approaches to outperform human actions in terms of knowledge discovery gained the attention of business and research communities all over the world and this field of study witnessed rapid progress in the past few decades.

In computer science and the field of computers, the word artificial intelligence has more popular due to the recent advances in the field of artificial intelligence and machine learning. Artificial intelligence technology improves the performance and effectiveness of 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. AI technologies have matured to the point in offering real practical benefits in many of their applications. Major Artificial Intelligence areas are Expert Systems, Natural Language Processing, Speech Understanding, Robotics and Sensory Systems, Computer Vision and Scene Recognition, Intelligent Computer Aided Instruction, Neural

Computing. From these Expert System is a rapidly growing technology which is having a huge impact on various fields of life. The various techniques applied in artificial intelligence are Neural Network, Fuzzy Logic, Evolutionary Computing, and Hybrid Artificial Intelligence Artificial intelligence is it is more permanent, consistent, less expensive, has the ease of duplication and dissemination, can be documented and can perform certain tasks much faster and better than the human hence we can say AI has more advantageous as compare to human.

The Turing Test Approach: The Turing test was proposed Alan Turing (1950). This test was designed to test that whether a particular machine can think or not. The test involves a human interrogator who interacts with a human and with a machine and has to tell who is human and which one is machine. The computer passes the test if an interrogator after posing some written questions, cannot tell whether the written response is coming from human or from the machine. Artificial intelligence used to solve the problems of different areas it may be science & technology, finance, medical, environmental, marketing, banking.

II. APPLICATIONS OF ARTIFICIAL INTELLIGENCE

A. Marketing

Marketing is a way to sugar coat your products to attract more customers. We, humans, are pretty good at sugar coating, but what if an algorithm or a bot is built solely for the purpose of marketing a brand or a company? It would do a pretty awesome job!

In the early 2000s, if we searched an online store to find a product without knowing it's exact name, it would become a nightmare to find the product. But now when we search for an item on any e-commerce store, we get all possible results related to the item. It's like these search engines read our minds! In a matter of seconds, we get a list of all relevant items. An example of this is finding the right movies on Netflix.

One reason why we're all obsessed with Netflix and chill is because, Netflix provides highly accurate predictive technology based on customer's reactions to films. It examines millions of records to suggest shows and films that you might like based on your previous actions and choices of films. As the data set grows, this technology is getting smarter and smarter every day.

With the growing advancement in AI, in the near future, it may be possible for consumers on the web to buy products by snapping a photo of it. Companies like CamFind and their competitors are experimenting this already.

1) Ways Intelligent Marketers Use Artificial Intelligence

- AI-enhanced PPC advertising.
- Highly personalized website experience and better CRO.
- AI-powered content creation. ...
- Content-creation chatbots. ...

- Intelligent email content curation. ...
- Churn prediction and smart customer engagement.
- AI-powered customer insights.
- Automated image recognition.

B. Agriculture

Here's an alarming fact, the world will need to produce 50 percent more food by 2050 because we're literally eating up everything! The only way this can be possible is if we use our resources more carefully. With that being said, AI can help farmers get more from the land while using resources more sustainably.

Issues such as climate change, population growth, and food security concerns have pushed the industry into seeking more innovative approaches to improve crop yield. Organizations are using automation and robotics to help farmers find more efficient ways to protect their crops from weeds.

Blue River Technology has developed a robot called See & Spray which uses computer vision technologies like object detection to monitor and precisely spray weedicide on cotton plants. Precision spraying can help prevent herbicide resistance. Apart from this, Berlin-based agricultural tech start-up called PEAT, has developed an application called Plantix that identifies potential defects and nutrient deficiencies in the soil through images.

The image recognition app identifies possible defects through images captured by the user's smartphone camera. Users are then provided with soil restoration techniques, tips, and other possible solutions. The company claims that its software can achieve pattern detection with an estimated accuracy of up to 95%.

C. Health Care

When it comes to saving our lives, a lot of organizations and medical care centers are relying on AI. There are many examples of how AI in healthcare has helped patients all over the world.

An organization called Cambio Health Care developed a clinical decision support system for stroke prevention that can give the physician a warning when there's a patient at risk of having a heart stroke. Another such example is Coala life which is a company that has a digitalized device that can find cardiac diseases.

Similarly, Aifloo is developing a system for keeping track of how people are doing in nursing homes, home care, etc. The best thing about AI in healthcare is that you don't even need to develop a new medication. Just by using an existing medication in the right way, you can also save lives.

D. Gaming

A majority of the video games —whether they're featuring racing-car games, shooting games, or strategy games – they all have different components that are powered by AI or related applications. For example, the enemy bots or those neutral characters. The main objective of utilizing AI in gaming is to deliver a realistic gaming experience for players to battle against each other on a virtual platform. In addition, AI in gaming also helps to increase the player's interest and satisfaction over a long period of time.

In video games, artificial intelligence (AI) is used to generate responsive, adaptive or intelligent behaviors primarily in non-player characters (NPCs) similar to human-like intelligence. Artificial intelligence has been an integral part of video games since their inception in the 1950s. AI runs on the stores of information accessible to it and uses this data to make an existence where characters can live and perform basic actions. All the essential data gathered through AI is then engineered to create a virtual gaming environment involving scenarios, motives, and actions attributed to the gaming characters that are becoming increasingly realistic and natural.

To perform this, AI algorithms must be given a bounty of data to have the best possible responses to specific stimuli. The typical features of game development make them a perfect play area for practicing and actualizing AI techniques. Most games are well perused; it is moderately easy to generate and utilize the information, and states/activities/rewards are relatively clear. Making Games Smarter Than Ever

AI-based Voice intelligence is now changing the way in which games are played. These assistants bolster a wide scope of intelligent games across genres. Apart from hosting their own games, recent advancements show their entrance into console games too. The main objective of game developers in the future will be to plan strong frameworks inside games. This will require present-day AI techniques, for example, design acknowledgment and reinforcement realizing, where the characters inside the games will self-learn from their own behavior and evolve accordingly. The gaming industry has recognized this, and some have even started using these ideas.

1) Making Games More Real

There have been staggering progressions in 3D visualization techniques, physics-based stimulations and more recently, incorporation of Virtual Reality and Augmented Reality in games. These technologies have enabled game developers to create intelligent, visually appealing games which one would never envision 10 years back.

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