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A STUDY OF ARTIFICIAL INTELLIGENCE & ITS APPLICATIONS

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ABSTRACT
It is the science and engineering of making intelligent machines, especially intelligent computer programs. It is related to the similar task of using computers to understand human intelligence, but AI does not have to confine itself to methods that are biologically observable. While no consensual definition of Artificial Intelligence (AI) exists, AI is broadly characterized as the study of computations that allow for perception, reason and action. Today, the amount of data that is generated, by both humans and machines, far outpaces humans' ability to absorb, interpret, and make complex decisions based on that data. Artificial intelligence forms the basis for all computer learning and is the future of all complex decision making. This paper examines features of artificial Intelligence, introduction, definitions of AI, history, applications, growth and achievements.

KEYWORDS-
machine learning,deep learning,neural networks,Natural Language Processing and Knowledge Base System.

INTRODUCTION
Artificial Intelligence (AI) is the branch of computer science which deals with intelligence of machines where an intelligent agent is a system that takes actions which maximize its chances of success. It is the study of ideas which enable computers to do the things that make people seem intelligent. The central principles of AI include such as reasoning, knowledge, planning, learning, communication, perception and the ability to move and manipulate objects. It is the science and engineering of making intelligent machines, especially intelligent computer programs.

OBJECTIVES-
1..To study the Artificial intelligence.
2. To study the Artificial intelligence Applications.
3. To study Scope of AI .

Applications of AI

- **AI in E-commerce**
  AI is providing a competitive edge to the e-commerce industry, and it is becoming more demanding in the e-commerce business.
  AI is helping shoppers to discover associated products with recommended size, color, or even brand.
- **AI in education:**

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AI can automate grading so that the tutor can have more time to teach. AI chatbot can communicate with students as a teaching assistant.

AI in the future can be work as a personal virtual tutor for students, which will be accessible easily at any time and any place.

- **AI in Healthcare**

  In the last, five to ten years, AI becoming more advantageous for the healthcare industry and going to have a significant impact on this industry.

  AI can help doctors with diagnoses and can inform when patients are worsening so that medical help can reach to the patient before hospitalization.

- **AI in Gaming**

  AI can be used for gaming purpose. The AI machines can play strategic games like chess, where the machine needzs to think of a large number of possible places.

- **AI in Finance**

  AI and finance industries are the best matches for each other. The finance industry is implementing automation, chatbot, adaptive intelligence, algorithm trading, and machine learning into financial processes.

- **AI in Data Security**

  The security of data is crucial for every company and cyber-attacks are growing very rapidly in the digital world. AI can be used to make your data more safe and secure. Some examples such as AEG bot, AI2 Platform,are used to determine software bug and cyber-attacks in a better way.

- .**AI in Social Media**

  Social Media sites such as Facebook, Twitter, and Snapchat contain billions of user profiles, which need to be stored and managed in a very efficient way. AI can organize and manage massive amounts of data. AI can analyze lots of data to identify the latest trends, hashtag, and requirement of different users.

- **AI in Robotics:**

  Artificial Intelligence has a remarkable role in Robotics. Usually, general robots are programmed such that they can perform some repetitive task, but with the help of AI, we can create intelligent robots which can perform tasks with their own experiences without pre-programmed.

SCOPE OF STUDY-

A machine can be developed with artificial intelligence by reverse engineering human abilities and traits. Artificial intelligence is a technology that enables computers to function independently but intelligently by reading human behavior. It is designed to create intelligent machines.

1. Develop the problem-solving ability
2. Incorporate knowledge representation
3. Facilitate planning

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4. Allow continuous learning
5. Encourage Social Intelligence
6. Promote creativity
7. Achieve General Intelligence
8. Promote synergy between humans and AI

Methodology

The study is descriptive in nature and conducted through study of various literature and published secondary data .Thus the study purely adopts secondary data source through internet and academic database like literature reviews, empirical studies, website, books, journal, reports etc.

Research design

The research philosophy focuses on the mechanism of beliefs and assumptions regarding knowledge development. It is precisely what the researcher works on while conducting research and mounting expertise in a particular area. In this research, the positivist philosophy of analysis is used. Positivism focuses on an observable social reality that produces the laws, just like generalizations. This philosophy uses the existing theory for hypotheses development in this study.

Benefits of Artificial Intelligence

1. Reduction in Human Error

One of the biggest benefits 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.

Example:

An example of the reduction in human error through AI is the use of robotic surgery systems, which can perform complex procedures with precision and accuracy, reducing the risk of human error and improving patient safety in healthcare.

2. Zero Risks

Another big benefit 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, 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.

Example:

One example of zero risks is a fully automated production line in a manufacturing facility. Robots perform all tasks, eliminating the risk of human error and injury in hazardous environments.

3. 24x7 Availability

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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.

Example:

An example of this is online customer support chatbots, which can provide instant assistance to customers anytime, anywhere. Using AI and natural language processing, chatbots can answer common questions, resolve issues, and escalate complex problems to human agents, ensuring seamless customer service around the clock.

4. Digital Assistance

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.

Example:

We all know that businesses have a customer service crew that must address the doubts and concerns of the patrons. Businesses can create a chatbot or voice bot that can answer all of their clients' questions using AI.

Related Reading: Top Digital Marketing Trends

5. New Inventions

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

Example:

Another example of new inventions is self-driving cars, which use a combination of cameras, sensors, and AI algorithms to navigate roads and traffic without human intervention. Self-driving cars have the potential to improve road safety, reduce traffic congestion, and increase accessibility for people with disabilities or limited mobility. They are being developed by various companies, including Tesla, Google, and Uber, and are expected to revolutionize transportation.

6. Unbiased Decisions

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.

Example:

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An example of this is AI-powered recruitment systems that screen job applicants based on skills and qualifications rather than demographics. This helps eliminate bias in the hiring process, leading to an inclusive and more diverse workforce.

7. Perform Repetitive Jobs

We will be doing a lot of repetitive tasks as part of our daily work, such as checking documents for flaws and mailing thank-you notes, among other things. We may use artificial intelligence to efficiently automate these menial chores and even eliminate "boring" tasks for people, allowing them to focus on being more creative.

Example:

An example of this is using robots in manufacturing assembly lines, which can handle repetitive tasks such as welding, painting, and packaging with high accuracy and speed, reducing costs and improving efficiency.

Benefits of AI for Accounting

The most common use for AI in accounting is to take care of repetitive tasks. For example, AI systems can capably, and with minimal error, complete tasks that include the following:

- Inputting and matching data
- Receipt reconciliation
- Creating and sending invoices
- Expense reports
- Tracking price changes
- Account reconciliation
- Sorting transactions
- Data recording and reporting

Disadvantages of Artificial Intelligence

1. High Costs

The ability to create a machine that can simulate human intelligence is no small feat. It requires plenty of time and resources and can cost a huge deal of money. AI also needs to operate on the latest hardware and software to stay updated and meet the latest requirements, thus making it quite costly.

2. No Creativity

A big disadvantage of AI is that it cannot learn to think outside the box. AI is capable of learning over time with pre-fed data and past experiences, but cannot be creative in its approach. A classic example is the bot Quill who can write

3. Unemployment

One application of artificial intelligence is a robot, which is displacing occupations and increasing unemployment (in a few cases). Therefore, some claim that there is always a chance of unemployment as a result of chatbots and robots replacing humans.

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For instance, robots are frequently utilized to replace human resources in manufacturing businesses in some more technologically advanced nations like Japan. This is not always the case, though, as it creates additional opportunities for humans to work while also replacing humans in order to increase efficiency.

4. Make Humans Lazy

AI applications automate the majority of tedious and repetitive tasks. Since we do not have to memorize things or solve puzzles to get the job done, we tend to use our brains less and less. This addiction to AI can cause problems to future generations.

5. No Ethics

Ethics and morality are important human features that can be difficult to incorporate into an AI. The rapid progress of AI has raised a number of concerns that one day, AI will grow uncontrollably, and eventually wipe out humanity. This moment is referred to as the AI singularity.

6. Emotionless

Since early childhood, we have been taught that neither computers nor other machines have feelings. Humans function as a team, and team management is essential for achieving goals. However, there is no denying that robots are superior to humans when functioning effectively, but it is also true that human connections, which form the basis of teams, cannot be replaced by computers.

FINDINGS

· AI will remove the repetitive time consuming tasks performed by traditional system of accounting.

· It will reduce the possibility of financial fraud. Computer software need to complete heavy accounting and other works, accounting personnel only preview this. AI can perform bookkeeping, maintain register, and produce financial statement through analysing the data so there exist much more accuracy and relevance.

· Through AI based software company can improve the quality of accounting information. Accounting personnel in traditional accounting take ample manpower and financial resources to check various vouchers, accounting books, statements etc. Resulting fatigue and mistakes for long exertion which distorts accounting information. But AI will perform those with high efficiency and accuracy.

· Implementing AI in various fields, industry can improve productivity and facilitate higher Customer services.

· It can be helpful for time and manpower saving and this can be reallocated into more Complex and value added task. Risk aspects of AI implementation

· In case of organization under greater monitoring by AI there exist some conflict of interest and threat of independence on the part of the external auditor.

· The risk of extinction of conventional jobs and tasks exist due to introduction of artificial intelligence. So huge amount of unemployment will arise. Extensive use of AI will reduce the demand for accounting personnel. Existing personnel face the crisis of elimination.

· Accounting rules, laws, and standards may change time to time. For present level of Intelligence in AI application it is not possible for the AI system to update itself in response to changes in laws and regulations and policies. So frequent changes may hamper the process.

· The cost of implementing AI based technology is high. Many organisation cannot accept it at a time.

· AI based system of accounting need expertise training and knowledge. There exist reluctance from the side of accountants and auditors in our country to be accomplished with the technology.

Conclusions

With the advent of the AI era, intelligent technologies are gradually applied in the accounting industry, which brings both opportunities and challenges to the accounting industry and its practitioners. On one hand, AI-based systems play an important role in improving business efficiency, reducing work errors, preventing and controlling enterprise risks, improving enterprise competitiveness and human resource efficiency, and cause many opportunities for new emerging important roles and jobs, which revolutionizes the traditional accounting industry.

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6. AI applications