RECENT USED AND FUTURE APPLICATION OF ARTIFICIAL INTELLIGENT (AI)

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Abstract: -

Recent year AI is the wildest and growing field of technology and computer science. AI has a great success achievement in very short time duration. Artificial Intelligent is mainly the process of behavioral of human intelligence to machines. In this paper, we have discussed the Application of recent year and future scope of Artificial Intelligence In the upcoming, AI machines will develop and replace human capabilities in numerous areas. AI is the intelligence powerful machines or software. So the artificial intelligent is the sub-branch of computer science. Recent year AI is very a wild field in computer engineering as it has superior the human life in different areas. In the last 2 decades. AI has significantly improved the manufacturing performance, different service sector and accordingly in the field of education also. AI Application is heaving a vast effect on different fields of life as practiced system is widely used recent day to solve the complex problems in several areas as business, engineering, education, medical, forecasting of weather etc. The Artificial intelligent areas provide work for the technology has seen an increase in the effectiveness and excellence. Sometime AI called machine intelligence behavior like a human and animal nature.

This paper presents the application of recent year and future scope of AI in different fields. Also present the current development of AI technology in the real world and their applications as education, medical field, agriculture, work efficiency, climate change. After analyzing the paper I concludes the future potential of Artificial Intelligence. The AI scope is highly favorable universal and especially in India. It has massively incredible potential to transform respectively sector of both the general and world economy for the benefit of society. These technology is not just a only technology under AI, however there are various useful technologies. AI is creating the revolution in science and technology all around the world, there won't be every industry or different sectors which would continue untouched by this powerful tool called Artificial Intelligence (AI).

Key Terms- artificial intelligence (AI), intelligent machines, Robotics, Education, Future scope of AI

I. What is meaning of Artificial Intelligence (AI)

In Figure 1 show AI word to break into three main and necessary parts. A complete entire Artificial Intelligence (AI) solution at Microsoft, we call this a System of Intelligence and is able to ingest human equal knowledge (e.g., using of computer, vision of computer and machine reading) and use this data to systematize and increase speed of tasks that were previously only performed by humans. It is necessary here to have a well-defined task structure to this engineer against and in a business setting this structure is provided by business and economic domain expertise. You need a massive bank of data to get the system up and running, and a strategy to continue generating data so that the system can respond and learn. Finally, you need Machine Learning routines that you can detect patterns in and make some predictions from the unstructured data. This section will work through each of these pillars, and in later sections we dive in detail into Deep Learning models, their optimization, and data generation.
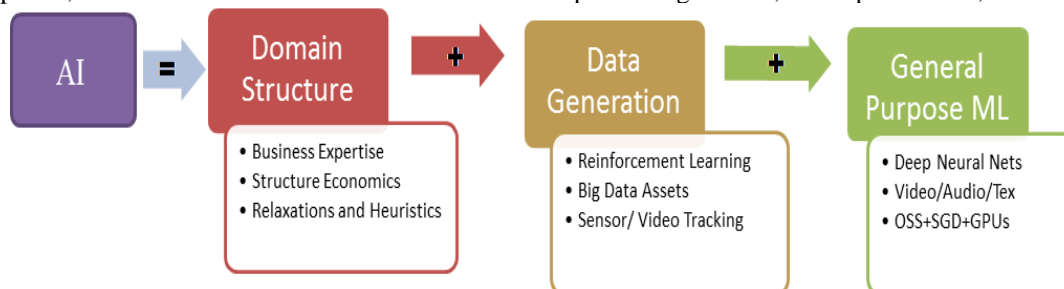

Figure 1: AI systems are self-training structures of ML predictors that automate and accelerate human tasks

We have notice that explicitly has separated ML from AI here. This is important: that they are different from confused technologies. MLis a fantastic things, but it is basically limited from predicting a future that looks mostly like the past. These are the tools for pattern recognition. In contrast, an AI system is able to solve complex problems that have been previously reserved for humans. This ruled is breaked by different problems into a bunch of simple prediction tasks, each of these can be attacked by a 'dumb' ML algorithm. AI uses instances of Machine Learning as components of the larger system. These ML instances need to be organized within a structure defined by domain knowledge, and they need to be feed data that helps them to complete their allotted prediction tasks.

This is not to down-weight the importance of ML in AI. In contrast to earlier attempts at AI, the current instance of AI is ML-driven. ML algorithms are implanted in every aspect of AI, and below we can describe the evolution of Machine Learning towards status as a general purpose technology. This evolution is the main driver behind the current rise of AI. However, ML algorithms are building blocks of AI within a larger context.

Artificial Intelligence (AI) [7–10] is the science and engineering concerned with the computational understanding of intelligent behavior and therefore the creation of intelligent machines. AI embodies a heterogeneous set of tools, techniques, and algorithms, as shown in Figure 2, including neural networks, genetic algorithms, symbolic AI, and deep learning. These major areas are showing exponential growth and making significant impacts in diverse areas like health care, space, robotics, and military. With the increasing amount of data, ubiquitous connectivity, high-performance computing, and various algorithms present at our disposal, AI is going to add a new level of efficiency and sophistication to future technologies.

One of the primary goals of AI field is to provide fully autonomous intelligent agents that interact with their environments, find out optimal behaviors, and improve over time through trial and error almost like humans. It has been a long-standing challenge, ranging from robots, which can be a sense and react to the world around them, to purely software-based agents, which can interact with natural language and multimedia. Current AI technologies are utilized in driving, aviation, medicine, online advertising, image recognition, and personal assistance.
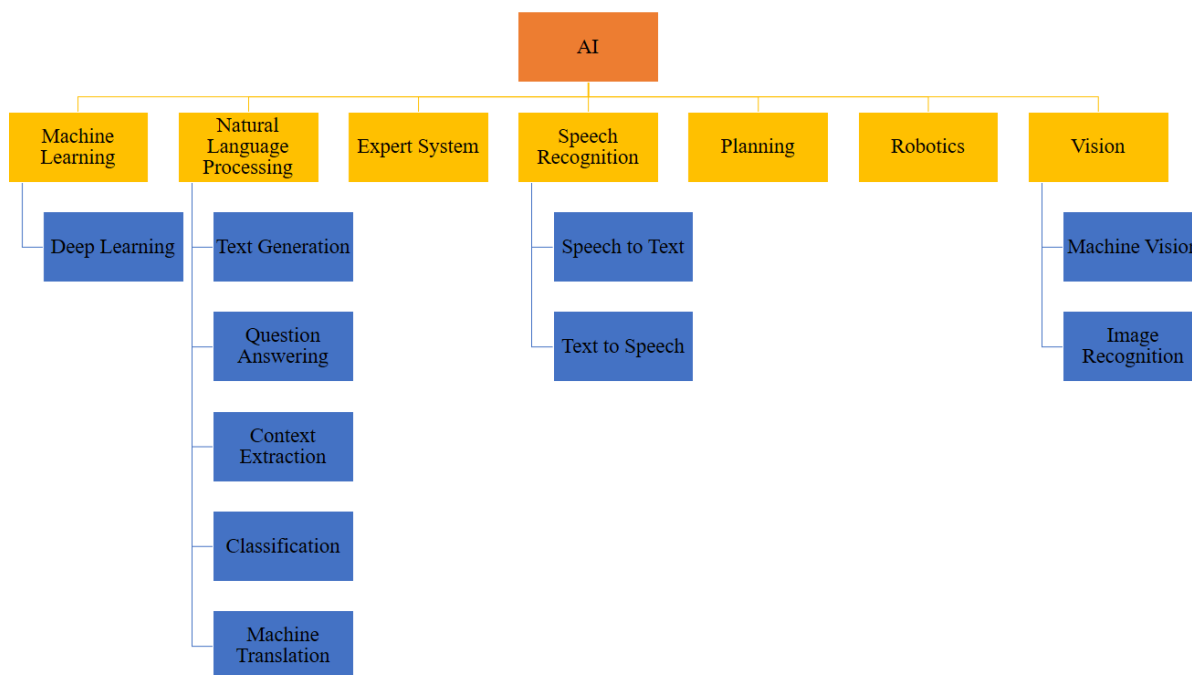

Figure 2: Different Field of Artificial intelligence

The recent success of AI has captured by the imagination of both the scientific community and the public. An example of this is autonomous cars [1–6] by providing the ability to make intelligent decisions on maneuvers in variable, real-traffic road conditions. Another example is the AlphaGo and AlphaZero [11, 12], is developed by Google DeepMind, to play the board game Go, and becoming the first machine to beat a professional player. This has led to both the excitement and fear in many that AI will surpass humans in most of the fields.

II ARTIFICIAL INTELLIGENT MEANING

Artificial intelligence is the combination of two words artificial + intelligence. Where artificial means 'not real' or 'natural' and by intelligence means 'the ability to reason, to trigger new thoughts, to perceive and learn'. Artificial intelligence can be defined that the area of computer science is mainly focused on the making of such kind of intelligent machines that work and give reactions same like human beings. It is the combination of many activities that includes designing the artificial in computers that are recognized by the speech, learning, planning and solving the problem. When any system adapts itself according to situation in any environment is called intelligent. In other words, it can be defined as programming such as machines which can think and act with some level of human intelligence is known as artificial intelligence [13]. Artificial intelligence can be defined as efficiently use of limited resources. So artificial intelligence can be defined as making of computer programs to solve complex problems same like human is solveing the problem. So it is also divided into two parts one is to solve the complex problems by the machine and second is same like human beings. The term artificial intelligence is also used to describe a property of machines or programs: the intelligence that the system demonstrates. Artificial intelligence is the

combination of science and engineering for making the machines which behaves in intelligent manner. It is combined in different fields like philosophy, psychology and computer science.
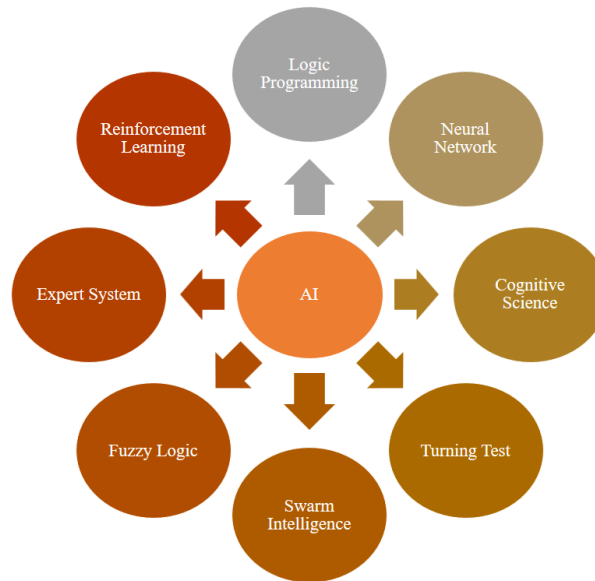

Figure 3: Factors included in AI

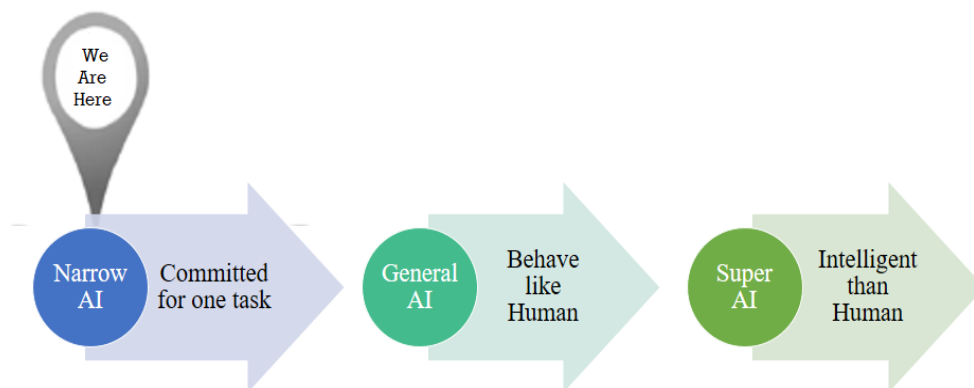## III. Types of Artificial Intelligent

Figure 4: Types of Artificial Intelligent

A. Narrow AI

The systems with narrow AI is used only for some selective tasks, these systems are programmed for limited work and can't take decisions on their own. Single task is known as weak AI.

Applications of narrow AI is increasing rapidly in our daily routines i.e., detecting in spam emails, music recommendations and many more[14].

Apple's Siri is one of the widely used examples of narrow AI which uses ML algorithms in mobiles. Face recognition, share predictions, weather forecasts assistant are also the result of AI.
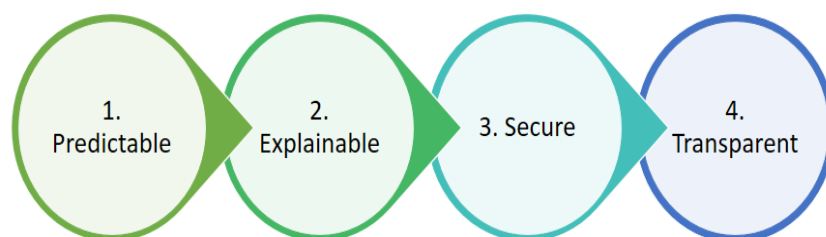

Figure 5: Four Steps to Good Narrow AI

B. General AI

General AI is also known as Artif Intelligence (AGI) and is strong AI which has the ability to read and analyze the problems like human beings. But till now there is no such systems exists with AGI and differentiate the things, control their imagination scientists finds it is very difficult task to define for the machine because it is a very tough task to define what a human intelligence is. General AI has broader field of its execution and can imitates human intelligence[15].

So far it has not been achieved continuously working to find AGI and can be achieved till 2040.

C. Super AI

It is the separate perception of AI, which surpasses the human intelligence it can perform all the activities better than the humans using cognitive properties. Till now it is only a hypothetical concept of AI which believes that it can have the ability to think, make judgements like humans.

IV. Recent Used in AI

AI is helpful to improve education

From kindergarten to graduate school, one of the key ways artificial intelligence will impact education through the application of greater levels of individualized learning. Some of this is already happening through growing numbers of adaptive learning programs, games, and software. These systems respond to the needs of the student, putting greater emphasis on certain topics, repeating things that students haven't mastered, and generally helping students to work through their own phase, whatever that may be.

This kind of custom tailored education could be a machine-assisted solution of helping students at different levels and work together in one classroom, with teachers by the facility of learning and offering help and support when needed. Adaptive learning has already had a huge impact on education across the nation (especially through programs like Khan Academy)[14], and as AI advances in the coming decades adaptive programs like these will likely only improve and expand.

AI is helpful for healthcare industry

There has been immense progress for diagnosis and treatment of diseases helped by the AI. In rural areas there is the problem of accessibilities of the doctors and health-care staff. As a result, people are living in those remote areas feels insecure regarding treatment of their health hazard [16]. AI has come to rescue this problem [20, 21]. AI can predict outbreaks of diseases well ahead so that the healthcare staff can have a scope of taking to prevent the steps well ahead before the actual outbreaks take place [17]. By the help of AI, instruments are there for image recognition [22]. This is helping the diseased people who are visually impaired [18].

There are other examples, where AI can help the Healthcare industry [19].

AI is helpful for agriculture sector

By the help of AI, it is now being possible to obtain appropriate data concerning to issues of agronomic and weather information. This is helpful for the farmers to improve the production of crops. This process is called precision agriculture that helps to improve productivity of crops helpful to the address and the needs of the growing population.

AI and Climate Change

By the help of AI, weather events can be predicted or well ahead. It can also predict that weather the situation is occurred by natural disasters. By the help of AI, it has become possible to identify the disease-spreading insects and animals.

AI is helpful to improve work efficiency

Governments of many countries are now using AI technology to improve the efficiency of their employees working in all levels. Governments of different countries are also taking help of AI to improve their financial allotment mechanisms and to help by optimizing their budgets. There are other instances through which society is being benefited by the grace of AI.
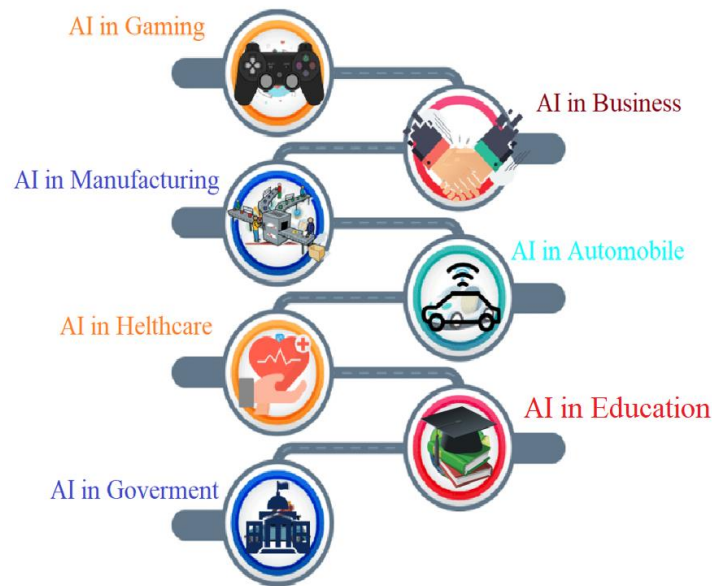
V. Future Scope:

Figure 6: Application of Intelligence

There are numerous applications of AI. Some of them are discussed below:

AI for Astronomy

AI can be deployed for solving universal problems. The AI tools and techniques can be helped by understanding the working and origin principles of universe.

AI for Healthcare

a) In last decades, the AI based systems and tools are used more prominently for healthcare industries. It is going to create a significant service while delivering health services.

b) The algorithms of AI based system can be delivered better diagnosis service than a human being. It can help the doctors to understand the critical cases of patients and intimate them the worsening signal for emergency medical help [23].

AI for Gaming

The AI based system can be participating in gaming purpose. The AI for a chess game, can develop algorithm for finding different possibilities of steps for a specific step from other player.

AI for Finance

The AI and financial institutions together can deliver better service while achieving the financial goals. The deployment of algorithms for chart bolt , trading, automation and machine learning can play a vital role [24].

AI for Data Security

The deployment of data security is getting essential component for industries worldwide. The utilization of AI algorithm for determining bugs in software processing and finding the cyber-attacks is getting popular among business units.

AI for Social Media

The social media sites contain many profiles for users and products. Arranging such a huge data set is a big issue for mankind. The AI can manage and arrange the data as per latest trends and requirement in the market.

AI for Travel & Transport

In the industry of travel and transport, the deployment of AI is getting popular. The AI based systems are capable for managing the orders, suggests of hotels and flights, finding best route for users. The business units deploy AI based Chart bolt for better interactive session with their customers.

AI for Automotive Industry

(a) Many prominent industries develop virtual assistant for helping users. The Tesla Bolt from Tesla company provides the real time assistant service for the users

(b) Many organizations are engaged on development of self-drive cars that provides more safety and secure journey than traditional drive.

AI for Robotics

(a) With the help of AI, the robotics can solve the task with their past experience. However, the traditional general robots performs repetitive task. But, the integration of AI can enhance the thinking capability of such robots [26].

(b) The deployment of AI algorithm for humanoid is another example of AI service. The humanoid robot named as Sophia and Erica can behave and talk like a human being.

(c)

AI for Entertainment

In the entertainment section of life, the algorithms of machine learning and AI can provide better service for the consumer. In applications such as Netflix, Amazon Prime, such algorithms delivers the recommended programs based on the search fields of the users [25]

AI for Agriculture

The traditional methods in agriculture require various resources like money, labor, and the time for better cultivation. However, the deployment of AI tools can enhance the predictive analysis of the farmer and monitoring mechanism of crop [27].

AI for E-commerce

In the industry units of e-commerce, the AI based tools can provide better combination of products with size, colors and brand. The reviews, comment and analysis over that can predict the suitability of the product for the particular user over web.

AI for education

(a) The deployment of AI algorithm for development of Chart bolt can enhance the better teaching assistant for the students.

(b) In future, it can work as personal tutor and will be available to access at any time.

CONCLUSION

The AI field gives to improve the ability of the machines to think using concepts, analytically. Great contribution to the different areas has been made by the AI (Artificial Intelligence) systems from the last two decades. AI will remain to performance an progressively important role in the numerous fields. This paper is based on the recent year application and future application to different area of artificial intelligence. Such as we know AI system have make easy our life in every aspect it can be applicable for writing of article or game making or essential assessment. Now day several machine have many experts mind can be combined which is more controlling than a single expert mind. Lot of labors effort can be done by only one a single machine and good decision making of it is that it never tired. Currently these types of robots are successful to make which have feelings it will finish the aloneness of the human. If human completely dependent on that machines than it can loss their life as we do not do any types of work by self and got lazy. As well as additional that it cannot provide the sensation like human. Consequently AI should be used only where there those are essentially necessary.

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