



Application of Artificial Intelligence (AI) in Different Fields of Human Needs: A Study

Dr. Susanta Kanrar

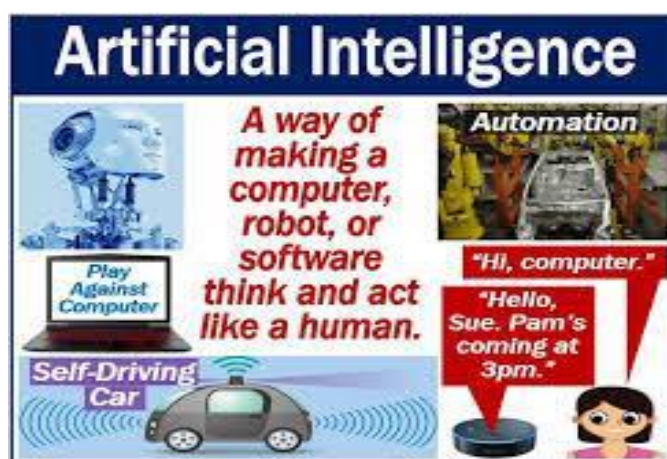
Assistant Professor, Department of Commerce, Shibpur Dinobundhoo Institution (College), Howrah, West Bengal.
Email - sk13_kol@rediffmail.com

Abstract: Artificial Intelligence (AI) is technology that enables computers and machines to simulate human intelligence and problem-solving capabilities in multidisciplinary ways. Artificial Intelligence (AI) has both advantages and disadvantages and we observed its various impacts on a wide range of industries. Current paper reviews the meaning of artificial intelligence and its various advantages, disadvantages and its applications in various areas. Present paper based on secondary data and data have been collected from various books, journal, news papers and reputed web sites. Paper found that AI has strong impact on different fields of human needs.

Key words: Artificial Intelligence, Advantages, Disadvantages, Impact, Human, Needs.

1.INTRODUCTION :

Artificial intelligence is known as machine intelligence, it is the intelligence processes by machines. It is the set of technologies that can work independently and also in union with each other to extend the capabilities of a machine to imitate human functioning. AI could be described as the ability of machines to make an intelligent decision like human beings i.e. work out what to do – usually in the context of achieving a particular task. AI is the similarity of human intelligence in machines that are programmed to think like humans and copy their steps. It can also be understood in such a way that such an expert system created, by which not only dialogue can be established between man and machine; Rather, all the activities entrusted to him by the command of the human could be accomplished by the machine with great alertness and scholarship. Artificial Intelligence (AI) utilized to simulate human intelligence for either solving a problem or making a decision. It is a branch of computer science and this is concerned about how computers behave like a human.

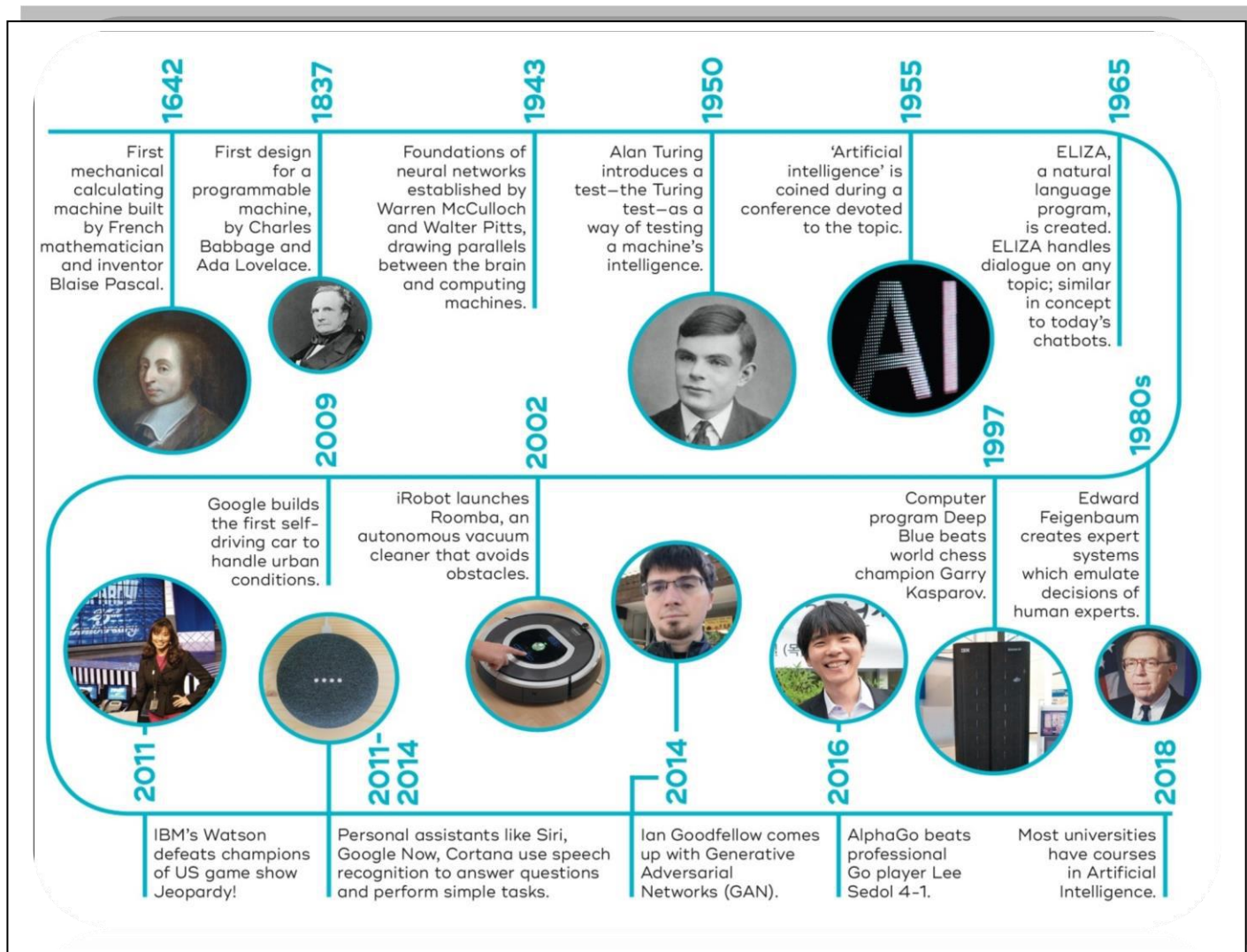


According to Nwakunor (2021), AI is the computer-controlled robots that think intelligently like human beings. The potential benefits of AI are significant, including increased productivity, cost savings, enhanced decision-making etc.



Currently AI technologies are using in different field to enhance efficiency and at the same time to make work cost effectives, areas like Hospitals and Medicines, Transportation, Telecommunication, Finance, Heavy Industries, News, Publishing & Writing, Toys and Games, Aviation, Music, Online and Telephone Customer Service in banking and other services related areas and many more. So finally it can say that Artificial Intelligence (AI) refers to the simulation of human intelligence in machines that are programmed to think and learn like humans, with the ability to adapt and improve their performance over time. A brief history of AI is given below:

Figure: 01
 Brief History of AI



Source: <https://qbi.uq.edu.au/brain/intelligent-machines/history-artificial-intelligence>

2. Objectives of Study:

The objectives of Study are:

- To Provide the basic ideas about AI;
- To Exhibit application of AI in different fields of human needs;
- To Explore the various Advantages and Disadvantages of Artificial Intelligence (AI)

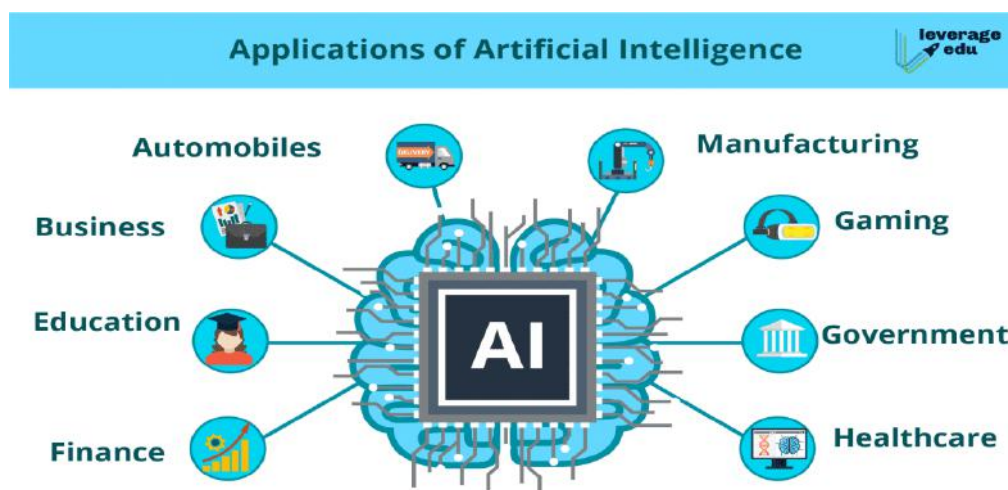


3. Literature Review :

- **Patel, K (2018)** has tried to explore the thought processes of human beings. Also focus that AI deals with representing those processes via machines (like computers, robots, etc.). AI has now taken over many sectors including the financial sector.
- **Ann Geisel (2018)**, has discussed the different levels of AI. The paper also studies the potential costs to the usage of AI. It tries to explore the other aspects of AI technology that were not explored earlier. The usage of AI in Marketing, Sales, Accounting and Finance has been discussed.
- **Xie, M (2019)**, focused on the development and application of artificial intelligence and machine learning in the financial system, as well as its impacts on macroeconomics and microeconomics. Some suggestions and strategies were provided for reasonable usage of artificial intelligence in financial risk management, based on the financial risk management raised by artificial intelligence.
- **Shukla Shubhendu S., Jaiswal Vijay (2013)**, in their study on Applicability of Artificial Intelligence in Different Fields of Life have pointed out the Various fields of artificial intelligence and expectations from artificial intelligence in each field and Social challenges also have been discussed.
- **Thomas H. Davenport & Rajeev Ronanki (2018)**, have discussed the various fields in which AI is engaged in and the paper attempts at a framework on how cognitive abilities can be built by work places to achieve their goals. It also lists business automation process, data analysis and employee and customer engagement as the key areas of business needs, where there is AI potential employability.
- **Tom C.W. Lin, (2019)** in his research paper on Artificial Intelligence, Finance and the Law has explained the risks and limitations—the ways of artificial intelligence and misunderstandings of it how harm and hinder law, finance, and society. Paper highlights the perils and pitfalls of artificial codes, data bias, virtual threats, and systemic risks relating to financial artificial intelligence. It also raises larger issues about the implications of financial artificial intelligence on financial cyber security, competition etc.

4. Application of AI:

Artificial Intelligence (AI) is very important in today's every one life. AI almost becoming a part of life, it play a very important role in everyday life, we can't imagine our world without AI.



It is everywhere, including robots, health, education, public safety and security, transportation, entertainment, employment, and in many more. AI is making our daily life more comfortable, effective and fast. Some of the applications of Artificial Intelligence are as follows-

- **AI in Gaming :**

One of the most commonly known applications of AI is in the gaming industry. The AI machines can play strategic games like Ludo, Chess, Knife shooter and many more. Particularly artificial intelligence is used in the areas where the large number of possibilities that are need to be think by the machines. But still AI is in its infancy and requires a lot more advancement in this area.



- **AI in Transportation:**

AI is totally transforming the transportation industry. AI can reduce the risk of road accidents and can enhance safety of the car by using sensors. Modern cars come with a wide range of sensors installed and these sensors build with AI technology. Self-driving vehicles are being built, which are capable of driving without a driver by using. It reducing the need for human drivers and improving safety. AI can be used to optimize traffic flows and reduce congestion, improving efficiency and reducing emissions.



AI also can help in predictive maintenance schedules, reducing downtime and improving reliability. In today Google's autonomous vehicles and Tesla's semi-autonomous cars are driving on city streets. Google's self-driving cars are completely autonomous and no human input needed.

- **AI in Health Care :**

Healthcare Industries are applying AI to make a better and faster diagnosis than humans. Artificial intelligence has to be used to promote the medical system and also to reduce the cost. Applying artificial intelligence in the healthcare industry makes things better. AI can be used to analyze large amounts of medical data and develop personalized treatment plans for patients. Prime applications include clinical decision support, patient monitoring and coaching, automated devices to assist in surgery or patient care, and management of healthcare systems. AI also can help in identify the potential drug interactions and side effects; finally it results in improving patient outcomes.

- **AI in E-Commerce**

AI provides the e-commerce industry a competitive edge, and it's becoming very important in the e-commerce business. AI is helping shoppers to discover associated products with recommended size, color, or even brand.

- **AI in Robotics:**

Artificial intelligence plays an important role in the development of robotics. Traditionally, robots and machines are programmed to perform repetitive tasks, but with the support of AI we can develop smart robots, capable of learning and executing tasks with their self experiences and here no any programming is required in that.





These robots are able to adapt to both uncertain and incomplete information in constantly changing environments. These Autonomous robots could develop and control themselves autonomously. Humanoid Robots are best examples for AI in robotics, recently the two intelligent Humanoid robot named as Erica and Sophia has been developed that can behave and talk like humans.

- **AI in Education:**

AI helps to make education more technological. AI can automate grading process so that the tutor can have more time to teach. AI chatbot also help to communicate with students as a teaching assistant. AI algorithms able to analyze individual student's performance very fast and tailor educational content accordingly the student need. AI also helps to automate administrative work, allowing teachers to focus more on teaching. With the help of AI students are able to study from anywhere in the world and also don't have any restrictions about the time. On time with the help of AI thousands of students can get the access of teachers and teachers can provide instructions very efficiently.

- **AI in Weather Forecasting:**

Now a day's AI is also being used for predicting the weather conditions. Mainly neural network is used for this purpose. Past data is provided to the neural network, which then analyses the data patterns and predicts the near future weather conditions.

- **AI in Safety & Security:**

The security of data is essential for every company whether company is small or large and presently cyber-attacks are growing very rapidly in the digital world. AI is very helpful in Cyber security. Currently Many organizations are using Artificial Intelligence to enhance the security in online transactions and related services. Artificial intelligence is bringing real value to security by detecting attacks, malware and other threats on the network. A.I. can detect the links to events and attack campaigns. Therefore AI is being used to reduce the chances of theft, fraud, data tampering, data coping etc. and AI also can authenticate the various transactions very fast. For examples like AEG bot and the AI2 Platform can be employed to identify software bugs and cyber-attacks. CCTVs are deployed for security purposes almost everywhere in the world, it is very helpful to solve crime related matters and preventing them.

- **AI in Social Media :**

Social Media platforms like Facebook, Twitter, Snapchat, instagram etc contain billions of user profiles, which requires being stored and managed a big size of data in proper way, where AI can do this very efficiently. It can analyze this large information to find the most recent trends, patterns, and preferences of a variety of people. AI also able to finds out the various needs of users.

- **AI in Finance:**

AI and the finance sector complement to each other. The finance industry is applying machine learning in automation, adaptive intelligence, and financial processes to solve the various types of problems. IBM software like Watson helps and guides to take decision like buying of house and such types of decision.

- **AI in Industry:**

AI robots have become very common in heavy industries to perform the various jobs that are otherwise considered hazardous for humans. For example cobots are capable to completing one or multiple tasks at the same time as in workplaces. These robots increase the efficiency and able to perform job without any break.

5. Various Advantages of AI:

The following are the Major Advantages of AI:

- AI can make human life faster, easier and smoother.
- With the help of AI, machines can be re programmed for work for long time period (24x7 hours) without getting tired.
- With the help of AI difficult work can done in short period,
- With the help of AI, processing, analyzing and keeping large amount of data is possible.
- AI is like a cheap labor, and by using this labor our work will be speedy and the profit can be increase.



- Success ratio can be very high, if we use AI in different fields.
- In the area of customers services, AI chat bots can interact with customers such as answering frequently ask questions or processing simple tasks or providing answers.
- AI requires less space and its size is also less.
- AI machines can do risky and dangerous tasks like by deploying AI machine mining and other fuel exploration process can do which can save human life.
- AI machine can automate repetitive tasks very easily and can complete those tasks much faster and more accurate than humans being.
- AI decisions are based on facts rather than emotions. Emotions always affect the decision in negative ways.
- Uses of AI in Military are also highly mentionable.

6. Various Disadvantages of AI:

The following are the Disadvantages of AI:

- Unemployment problem increased, as AI reduces human needs.
- AI lack creativity, mainly it follow predetermines program.
- AI totally depends on data availability and its quality.
- AI leads to human lazy.
- Not easy to develop AI, it is expensive.
- AI can be used for malicious purpose.
- AI leads to Lack of emotional intelligence.
- AI can't replace the human connection that creates the team. Machines cannot develop a bonding among humans which are important attribute where team management is involved.
- Privacy and security may loss.
- It is very difficult to understand
- AI doesn't have any emotions it is a machine that have no heart.
- Creativity is totally depends upon programmer not upon AI.
- Reliability of AI totally depends upon reliability of data/input.
- AI leads to technological dependency.

7. CONCLUSION:

From the above discussion it is clear that Artificial Intelligent eases human's life and by near future Artificial Intelligent would be able to provides more competitive advantage to us. AI is changing our lives every day, every movement. AI has made tremendous changes in the area of Health Care, Transportation, Social Media, Safety & Security, Robotics, E-Commerce, Education etc. Our coming future will be completely AI dependent in which all the work will be dependent on the machine which will make human life more easier, simpler and faster. But we must be kept in mind that we made machines, machines not made us. So it's proper utilization is highly necessary for human being, we must avoids its negatives effects.

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