



# A Short Review Of Artificial Intelligence

Shreyasi Patil<sup>1</sup>, Shweta Patil<sup>2</sup>

Faculty<sup>1</sup>, Assistant Professor<sup>2</sup>,

Department of Electronics Engineering,  
Walchand College of Engineering, Sangli, India<sup>1,2</sup>

## Abstract

In today's world, we live in a cybernetic society. Today there has been a lot of progress computers are faster and smarter than 20 years ago. Artificial Intelligence (A.I.) is a multidisciplinary field that aims to automate the activities that currently require human intelligence. At that time, science is not developed and technologies were not invented. So the working is totally dependent on the peoples and humans have recognized that "Today's science is the tomorrow's technology". The use of artificial intelligence (A.I.) has greatly simplified and eased the task, as machines have advanced in many areas today. This review involves the general concepts of artificial intelligence.

**Keywords-** Artificial Intelligence, Machine Learning, Digitalization

## INTRODUCTION

AI is a branch of computer science that aims to create intelligent machines. Artificial intelligence (AI) is a rapidly growing field that aims to create machines and computer systems that can perform tasks that normally require human intelligence, such as recognizing speech, making decisions, and solving problems. . The word Artificial means man-made (Anything, which is made by human beings) and intelligence means the capacity to have different skills or having the capacity to learn different skills and knowledge through which a complex problem can be solved.[2] It is the study of ideas which enable computers to do the things that make people seem intelligent. Recent advances in machine learning (ML), a subset of AI, have led to breakthroughs in image recognition, natural language processing, and game-playing. The central principles of AI include such as reasoning, knowledge, planning, learning, communication, perception and the ability to move and manipulate

objects .These techniques use large amounts of data to train models, which can then be used to make predictions or decisions. This is basically defined for development of software which is used for solving complex problems using application processes. According to father of artificial intelligence John McCarthy, who coined the term “Artificial intelligence” in 1956, said that “It is the combination of science and engineering to make intelligent devices for human welfare.” Enhancing computer abilities linked to human knowledge, such as learning, reasoning, and problem solving, is the aim of artificial intelligence (AI). AI applications include advanced web search engines (e.g., Google), recommendation systems (used by YouTube, Amazon and Netflix), understanding human speech (such as Siri and Alexa), self-driving cars (e.g., Tesla), automated decision-making and competing at the highest level in strategic game systems (such as chess and go) [1]. AI plays a very important role to exhibit intelligent behavior, to learn, demonstrate and give advice to the user.

## LITERATURE REVIEW

Peter Norvig and Stuart Russell [3] in their research paper “Artificial intelligence: A modern approach” have implemented the basic perspectives of artificial intelligence. They concluded that the artificial intelligence is a combination of reasoning, learning, perception, linguistic approach and problem solving. George F Ludger [4] who described structures and strategies for artificial intelligence. The review also contains the methodologies of artificial intelligence such as weak artificial intelligence and strong artificial intelligence. It also considers the current real world applications and current processes in artificial intelligence. Niklas Lavesson[5] also have described about the supervised type of machine learning .The ambition of this review is to introduce the types of machine learning such as supervised, unsupervised and reinforcement etc. The review also explores the applications of AI and machine learning in real time.

## MACHINE LEARNING

Machine learning is a current application of AI which promotes the reality just to be able to give machines the access to data for more ease in human work and just to learn them for themselves. Learning is a key hallmark of artificial intelligence. It is an ability of the machines to take real – time data and feedback and improves performance over a time. Machine learning is type of artificial intelligence which has ability to learn and takes the data to get good output. Both the terms, Artificial intelligence and machine learning combined together very frequently when the concepts like big data, data science and analysis comes in mind. Machine learning is very efficient solution to handle such a big data in multinational industries. They actually work like a super-computer. These machines or generally known as “Humanoids” are very perfect at their work. These robots/machines can talk, answer complex questions, and multiple jobs at a time. It also involves linguistic logic and reasoning. Artificial intelligence has 2 types:

## 1. Weak AI

The principle of Weak AI is that the machines behave as if they are intelligent. Weak AI proves that virtual abilities like thinking, talking, moving can be done by machine if they are programmed in that manner. E.g. In the chess game, the computer can play and move players automatically. The computer does not have thinking ability but in actual it is programmed so that the computer always takes right step.

## 2. Strong AI

The principle of Strong AI is that the machines will do calculations and think itself and will predict the answer in future. E.g. The artificial intellectual supercomputer „WATSON“ invented by IBM. Thus in future, there will be definitely such machines or may be humanoids which will do its own work and think more powerful than human beings.

**Following are some sectors which have the application of Artificial Intelligence:**

### **Banking**

The use of artificial intelligence in the banking sector is also increasing rapidly. Because artificial intelligence can ensure banking services in a short time. Several countries around the world are already offering AI in their banks to facilitate credit card online banking. Most banks offer online apps to facilitate account transactions, online payments, and anti-money laundering, as well as payment fraud detection. Artificial intelligence is working to make customers more useful and reduce personal workload.

### **Education**

In the field of education, the role of AI is no less. AI uses technology to revolutionize education. Although the education sector is most influenced by humans, artificial intelligence is slowly taking root in the education sector as well. AI grading in education can be automated, giving teachers more time. It can assess students and adapt to their needs, helping them to work at their own pace. Digital technologies can be effectively incorporated to provide smart content through grading assignments as well as online study material, e-conferencing, etc. Several problems in the education sector will be solved through the implementation of AI

### **Robotics**

With the increasing development of AI, robots are becoming more efficient at performing tasks that were previously very complex. Because AI tools and techniques are specifically designed for the field of robotics. Consisting of advanced robot sensors, high-definition cameras, voice recognition devices, etc., and in robotics, AI allows robots to learn processes and perform tasks with complete autonomy without any human intervention. AI is a very useful tool for robotic applications. When combined with advanced devices, it can help with optimization. It works very easily in complex places like space.

## Agriculture

Artificial intelligence has changed our most primitive and basic occupation, agriculture. Predictive analysis and crop and soil monitoring are being done using AI in agriculture. AI is helping farmers discover more effective ways to protect crops from weeds. AI has also improved grain production and improved real-time monitoring, harvesting, processing, and marketing.

## Conclusion

Artificial intelligence is revolutionizing the industry through its application and helping to solve complex problems. Predictive analysis and AI will undoubtedly play a major role in future content production and software development. AI is already changing sectors and helping to solve complex problems and this trend will continue. Global technological equality and artificial technology can become the future in all areas.

## REFERENCES

1. Allen, E., Triantaphillidou, S., The Manual of Photography, Ed.10, CRC Press, 2012,
2. A. Bansla and N. Bansla, "Artificial intelligence," Int. J. Appl. Eng. Res., 2012,
3. Peter Norvig; Stuart Russell, "Artificial Intelligence: A Modern Approach".
4. George F Ludger "Artificial Intelligence - Structures and strategies for complex problem solving" 5th Edition, Pearson, 2009.
5. Niklas Lavesson,"Evaluation and Analysis of Supervised Learning Algorithms and Classifiers", Blekinge Institute of Technology Licentiate Dissertation Series No 2006:04, ISSN 1650-2140, ISBN 91-7295-083-8