International Journal of Management and Economics ISSN: 2231 – 4687
Impact Factor-6.81 (SJIF)
Vol. I No. 28 Janaury-2019 UGC Referred Journal No:-64206

# Research Trends in Artificial Intelligence

*Prof. B.S.Waghmare

## Introduction

From the development of computers or machines, their ability to dodifferent tasks continued developing exponentially. People have built up the intensity of computer systems far as their differing working spaces, their computational increasing speed, and decreasing size with regarding time.One part of Computer Science called as Artificial Intelligence seeks after making the computers or machines as intelligent as like human beings are.

As per the main founder of Artificial Intelligence, John McCarthy, it is "The science as well as engineering of creating the intelligent machines, particularly intelligent computer softwares".Artificial Intelligence term is used in wide range of concept likebuild a computer, a computer operated robot, or a software that works and think intelligently, in the sameway the intelligent humans think.AI is practiced by concentratehow human brain thinks, observe &learn, then take decision, and performs work as well as trying to solve difficulties, and after that using the results of this research as a foundation or root of creating more powerful intelligent software applications.

Artificial intelligence significantly limits therisk to humans in different applications. Computationally strong artificialintelligence system helps to fully create the highaccuracymachine abilities of robots, regularly liberating them from direct human control and inconceivably enhancing their productivity. At the point when a robot interfaceswith real world environment, it senses to collectinformation and thencheck the collected result with expectations. Hence the adequacyofthe robot is constraintby the exactness to which its programming models this present reality.

## Development of Artificial Intelligence

The concept of artificial intelligence is moderately young. The making ofArtificial Intelligence in educationwas introduced in 1950s, when scientists thinks that machine can process with intellectual ability like human beings.A British mathematicianAlan Turing decides to do a testto check whether machines can intelligent or not. Later this test know to universal as Turing Test. In this testamachine attempts to do operations itself as a human being in animitation game by providing human-like answersto different questions. Turing assume that machine who communicate with another human being like human then that machine can be considered as intelligent like human being. Artificialintelligence concept was introduced in 1956 by John McCarthy. This term introduced for conference organized in same year. This conference called as Dartmouth Conference by AI scholars; keep AI as unique discipline area. In this conference advantages of AI was introduced and model that behave like intelligent human being was proposed. Most of the AI research was carried out in year 1956 to 1966 in theoretical in nature. The first AI program, the Logic Theorist can prove many mathematical theorems. After that many other programs were by using AI theories like "Sad Sam" which is capable to understand simple English sentences and then program analysed that sentences and from that it make conclusions from the sentence analysed in conversion. The Knowledge Base (KB) is a data used to make conclusion.

Later in 1967 Joseph Weizenbaum developed a program at MIT called as ELIZA which was capable to analyse the responses from doctor to patients. After many successful practical uses of AI that is feasible, the many researchers attract towards this interesting domain. This attraction produce new research stated that "a different research fielddeals with increasing the capabilities of the computer to do work that resemble those can be done by human beings,", this is published in 1988 by V. Daniel in article "TheDevelopment of Artificial Intelligence". Some successful and interesting domain of current AI research is Machine learning, Neural networks, Data Mining and Robotics.

## AI RESEARCH TRENDS

### a.Large-scale machine learning

Many researcher works on the scale available algorithms to do tasks on extremely large data sets as many as in low passes. For example, a Conventional algorithm requiresseveral passes over the data set, whereas modernnew algorithms are designed such way that it requires only a single pass.

### b.Deep learning

* Associate Prof, C.D. Jain College of Commerce, Shrirampur, Maharashtra, India

Deep learning play very important role into other areas of perception, like as audio processing or editing, speech recognition, and natural language processing for many application like Sentiment analysis.

**c. Reinforcement learning**

Conventional machine learning algorithm mostly focused on pattern recognition and mining whereas reinforcement learning works on decision making.Reinforcement learning is a technology which puts AI to advance more deeply into the field of machine learning and performs different actions in the real world. Google Deep mind developed a new computer program called as AlphaGo that defeat the human Go champion in a five-game match in which most of the part was programmed using reinforcement learning.

**d.Robotics**

Many researchers work on training a robot that can interact with the world in effective, generalizable and predictable manner. As much as research is carried out on simple machine perception in which complexity is reduced, including computer vision techniques and haptic perception, in which most of the work carried out in machine learning, that will continue increasing advancing the capabilities and work of robotics.

**e. Computer vision**

Computer vision techniques are currently the most advance form of machine learning perception. By using computer vision techniques computers can perform some visual classification work much better than human being. Most of the current research is concentrate on automatic image classification, recognition and video tagging.

**f. Natural Language Processing**

Speech recognition and text recognition (OCR) are few popular example of Natural Language Processing which is trending concept of machine perception. Google said that 20% of current mobile asked over voice, and recent research have proven the chances of real-time voice to text or vice versa translation. Research is concentrating much more on powerful and capable systems that are able to communicate with people through voice and dialog.

**g.Internet of Things (IoT)**

As research becomes more advances the idea created that many devices can be connected to each other that collect as well as share information.These devices canbe appliances, Home Automation, vehicles tracing, buildings, cameras, and other hardware that can connect to other appliances. Thus it's a technology and wireless communication that connect the devices to each other, AI can process the data collected for intelligent and learning purposes.

**Conclusion**

The term artificial intelligence is genuinely an intriguing one.In the same way as other newtechnologies, AI is changing our livesby reducing efforts each day. It is veryconceivable that in the future AI will create more powerfulintelligent machines to make human life more simple andcomfortable.Like every other machines, AI machines perform different tasks what humanprogrammers ask them to do that tasks. However there is a need tounderstand AI properly, so we can make AI technology most beneficial.While these AI enabled systems can be very helpful to humanbeings which work cannot accomplish by current expert application. AI just simply completed with its time of early stages. It has implications that yet remainunknown to all world. The effort and research can create theamazing, usefuldevelopments in field of AI. There are also chances which cannotbe predicted when the computer start to think for itself. Thus AI is very useful and emerging technology that can helpful in many research trends and in many Domains.

**Reference**

[1] Barrett, Justin L., and Frank C. Keil. 1996."Conceptualizing a Nonnatural Entity:Anthropomorphism in God Concepts." CognitivePsychology 31 (3): 219–247.doi:10.1006/cogp.1996.0017.

[2] Elaine Rich, Kevin Knight 1991, "ArtificialIntelligence".

[3] Hibbard, Bill. 2001. "Super-Intelligent Machines."ACM SIGGRAPH Computer Graphics 35 (1): 13–15

[4] Nilsson, Nils J. *Principles of Artificial Intelligence*,Narosa Publishing House New Delhi, 1998

[5] Norvig, Peter *Paradigms of Artificial Intelligence*Programming Morgan Kaufmann Publishers, SanMateo, California 1992

[6] Norvis, Peter &Russel, Stuart *ArtificialIntelligence: A modern Approach,* Prentice Hall, NJ, 1995

[7] Patterson, Dan W. *Introduction to ArtificialIntelligence and Expert Systems*, Prentice Hall ofIndia Private Limited New Delhi, 1998

[8] Schildt, Herbert *Artificial Intelligence Using C*,Osborne McGraw Hill Berkeley, California,, 1987
[9] W. Patterson "An Introduction to ArtificialIntelligence and Expert System".
[10] http://www.cee.hw.ac.uk/~alison/ai3notes/all.html
[11] http://www.siggraph.org/publications/newsletter/is
sues/v35/v35n1.pdf.
[12] http://www.acm.org/crossroads/xrds3-1/aied.html

#####