

ARTIFICIAL INTELLIGENCE AND ITS TRENDS

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Abstract : Artificial Intelligence is the ability to think, to understand, to recognize patterns, to memorize, to make choice from alternatives and to learn from experience. Artificial Intelligence is to make replica of human brain's capabilities so that the computers start doing all those activities that the human is doing and in much less time. The recent developments in AI affected politics, journalism, games and public life. In politics the use of AI helped to better use of resources, energy and time in the election campaign to reach the target audience. The high computing power is used to analyse public opinion and the nature of voters across all regions perfectly.

IndexTerms - Narrow AI and Broad AI, AI revolution, AI and Politics, AI and Journalism, AI and Games, AI and People, Negative concern of AI

I. INTRODUCTION

The ability of an artificial entity such as a computer machine that makes it so intelligent to solve complex problems that is otherwise possible only by human brain is called artificial intelligence. It is the ability to think, to understand, to recognize patterns, to memorize, to make choice from alternatives and to learn from experience. Artificial Intelligence is to make replica of human brain's capabilities so that the computers start doing all those activities that the human is doing and in much less time. According to the philosophy of Artificial Intelligence, it can be categorized as Narrow AI and Broad AI:

A. Narrow AI

Concept is based on the fact that the technology can make machines intelligent. We can make machines to think so that they can do more than just following the instructions step by step. But these thinking features also need to be programmed in advance. Another example is chess playing with computer. Not all the moves are programmed step by step, but the programs are made in such a way that they extend their capabilities beyond what is programmed. So, Narrow AI is the capability of a machine to perform activities similar to a human but for a specific domain. In that context for which intelligence is developed, it can perform very intelligently but outside that context it is nothing.

B. Broad AI

Concept is based on the fact that machines could have human level intelligence and they can perfectly perform their activities like human beings. The possibility to design and develop machines in such a way that they can think, they can have reasoning ability and they can do each and every thing that human can do. It means they may be able to program themselves and others. But as expected by the program of AI, current research is far from these expectations and also it is a debate that whether it is possible.

II. AI IN RECENT EVENTS

C. AI and Politics

The most recent contribution of AI in politics is disclosed in Presidential elections in US. These elections are highly affected by recent developments in AI. The revolution in AI has changed the way election campaigns are performed in US. The use of AI helped to better use of resources, energy and time in the election campaign to reach the target audience. The high computing power is used to analyze public opinion and the nature of voters across all regions perfectly. During 2008 and 2012 US elections, these AI techniques were nicely used by Barack Obama's election campaigns.



D. *AI and Journalism*

AI has been used by journalism for a while. Machines (computer systems) have been covering sports events, covering national hazards, helping investigation, writing stories on specific events etc. It is called Robot Journalism. In the recent US presidential elections, AI is used in journalism up to the mark. American media used bots for the coverage of campaign results on Tuesday night. Bots are performing very well in converting raw data into narrative text with much speed and efficiency.



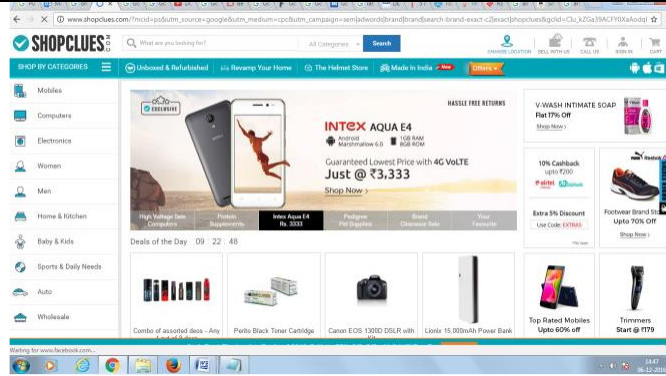
E. *AI and Games*

AlphaGo is an AI based machine developed by Google DeepMind. It created a history in the recent months by defeating the world champion of Chinese ancient board game “Go”. The world champion of board game, Lee Sedol of South Korea was challenged by Google DeepMind to five board game series in which AlphaGo defeated the champion by four to one. AlphaGo proved that machines can be made intelligent enough to defeat human brain. They can learn from the environment and can predict more accurately than a human brain can. They can make decisions more quickly and accurately than what is expected from human mind.

F. *AI and People*

Recent AI developments affected life of people directly or indirectly. The smart phones now provide intelligent keyboards which are able to anticipate the next words while typing some text that reduces the burden of typing all the text. Desktop computers and tablets now provide voice activated assistants to help. The tablets and other devices are now intelligent enough to follow voice commands to perform the tasks for users. Use of machine intelligence to capture user interests and online behavior is very common now on the web.

Whenever user visits a web site, in the background some intelligent algorithms execute to capture data about user’s interests and online behavior. The browsing history is analyzed by those systems and information is extracted from the data to make an intelligent guess to display advertisements of products that are of interest to the user. The above examples show that at every step of our daily routine, we face some form of machine intelligence which is now becoming crucial for business as well as for our lives.



III. NEGATIVE CONCERN OF AI USE IN POLITICS

The advancements in Big Data processing and Machine intelligence resulted in many advantages to election campaigns may be at country level or local level. But at the same time there is a concern that political use of AI is increasing negative aspects in modern politics by promoting wrong criticism of opposition, spreading falsehoods, raise social anxiety and encourage racial intolerance. But if we think deeply, these negative aspects were also connected with earlier way of campaign such as television, radio, newspapers etc. What has changed is just the speed and reach to the target.

Use of AI has also negative concerns with economic bases of politics. The use of AI will eliminate jobs at every level and it will arise negativity in political trends. It will also affect relations within and between nations.

IV. CHALLENGES AND SCOPE OF AI IN INDIA

India is lagging behind in the developments of AI as compared to other nations like US and China. Similar to other products of globalization, AI in India is also a side product of globalization which is becoming widely available without much political consideration. The necessary AI infrastructure for a revolution of AI in India is almost neglected by Indian policymakers. Infrastructure to store huge amount of data is provided by servers that are mostly located outside India.

Although, policymakers do not give much importance to these things but global companies like Microsoft and Amazon recently planning to invest in cloud infrastructures in India. Above that there is a lack of the culture of innovation necessary for AI development in India.

In India, till now AI developments are focused to consumer products and services only. The developments are driven by private sector and are being used for business policies and growth. The quite emergence of AI applications in India is not noticed by its policymakers in Government. To take full benefits of AI revolution there must be policies for AI innovation and adaptation in Government and public sectors. It must not be bound to private sectors only.

India must establish regional innovation centers in association with universities and private start-ups for manufacturing robotics and developing automation. Incentives must be offered to manufacturers to motivate them. It must promote infrastructure for cloud computing capacity inside India.

To promote culture of innovation, the National Education Policy must establish alternative models of education which are more suitable for the future of AI in India. To make the programmes such as Skill India and Digital India a perfect success, the recent innovations and future of AI perspective must not be ignored.

Even current developments of AI are not being used in government sectors to take their benefits. Current advancements of AI may be adopted by government sector to take its benefits such as preventing misuse of subsidy or loan, detecting income tax fraud etc.

V. CONCLUSION

This paper discusses recent advancements in AI at global level and their impact on global as well as local levels. In politics, AI is experimented by Barack Obama, Narendra Modi, Hillary Clinton and Donald Trump and they found it very useful technology. The use of AI helped to better use of resources, energy and time in the election campaign to reach the target audience. The high computing power is used to analyze public opinion and the nature of voters across all regions perfectly. In the recent US presidential elections, AI is used in journalism up to the mark. AlphaGo an AI based machine developed by Google DeepMind, created a history in the recent months by defeating the world champion of Chinese ancient board game "Go". Use of machine intelligence to capture user interests and online behavior is very

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