

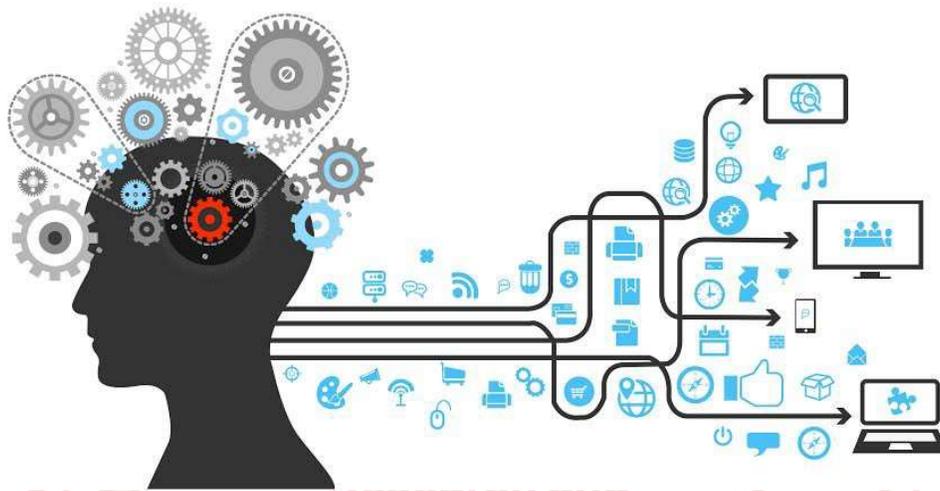


Transformational Planning for Artificial Intelligence

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1). INTRODUCTION

Humans And Machines:

AI - Artificial Intelligence has a considerably different meaning, unique things and diverse functions. Each person looks at it as a distinct theory, an artificial human created core and computer development program, and a system that requires human intelligence and performs special tasks beyond human capacity, such as decision-making, speech recognition, visual perception, and translation of languages.

The theory and practice of AI have an origin dating back to 1950 and thereafter, a gradual progress was made to substantiate its precise meaning and performance. Considering the rising number of virtual world providing an implicit significance to its theory and practice for the last several decades, an acute interest in AI has now reignited. The dynamic and rapid technological and scientific development pace

of AI has created difficulty to predict precisely what path we should take to enable us to alter this world in ways we need to comprehend it, resulting in policies and laws to remain one step at the back of all the technological development.

The human beings are very sophisticated and robust intellectual living gadgets on the mother earth, as we have our own intelligence to take decisions, and therefore, we ruled and controlled other living creatures of this planet. In the course of time, we learned and acquired various dynamic skills, necessary for survival, yet, our search process went further to explore more than what we have and wanted. The infinite intelligence having no boundaries started to visualize and invent means to help us save more time and to ensure better health, more security and safety and thus ventured to

formulate and devise machines that can extend our intellectual capacity for the multitask activities, and memorizing more information than available presently. Hence, while imagining the ways to improve our functioning, the first Analytical Engine, Turing-Complete computing machine was invented in 1833 by Charles Babbage, and from that time, the computer machines have transformed Analog era towards the Digital Era. In short, AI is a computational human behavior model, which programs and externally behaves like humans. It is a human extended thought of the computational model, with specific programs that internally operates like humans do.

2) Literature Review

John McCarthy, Herbert Simon, Allen Newell and Marvin Minsky together created the new AI concept in 1955. The popular Summer 1956 Dartmouth Conference gave further impetus to AI as a future generation field. They expected computer machines to think and perform like human beings and human intelligence. Hence, AI was instituted in 1956 as an academic instruct and discipline. Thereafter, several waves of optimistic ventures of various inventive activities of disappointment and loss of funds called AI Winter tracked new approaches, methods for the future success, with additional funding. Hence, the AI history of research got bifurcated into subfields, which again failed to effectively communicate within the groups. However, the 21st century advanced to new statistical approach to learning of machines, which were strong enough to surpass all other approaches, tools, and problems developing a renewed, inventive schools of thought. Well, this created the Decision Making concept because human beings cannot remain present at every place all the time, and also unable to take remotely operated decisions and that was conceptualized into Industrial revolution. Now, this has become a necessity and possibility after the information and data was transferred through the existing digital revolution where they are conveniently generated in multiples of trillions of bytes.

The AI is the procedural study to make computers to perform certain things, which presently people perform better. The initial AI attempts began in 1960, were made with checkers game playing, by providing a certain simple theorems, and thereon to solve general problems provided with simple tasks (Rich & Knight, 1991).

3) Definitions, Philosophy, Problem Statement, Risk Analysis, and goals

3.1 Definitions

AI is the intelligent skill of a machine to execute actions that needs intelligence, and those are logical deductions and inferences, the skill to recognize spoken languages and acumen to take decisions with creativity, depending on the previous knowledge and experience or otherwise based on the conflicting and insufficient information (Yang, 2013).

Yang Qiang, 2013. The Head of the Huawei s Noah s Ark Lab, has been elected a fellow of AI (the Association of the Advanced AI) at the 27th annual conference on AI, in Bellevue, Washington USA in July 2013.

3.2 Philosophy

The AI philosophical contribution is undisputed. George Luger, (1993), generated the natural means of initial point while evaluating the philosophical AI foundations, which had earlier started by Aristotle, in his philosophical work that generated the fundamentals of modern science. Galileo, the great scientist-philosopher observed and wrote contradicting the 'Obvious Age of Truths' and applied mathematical means to test them, challenging that this world operates as it really appears (Russell, et al., 1995). The Epistemological work of philosophy examines the nature of validity of knowledge which Rene Descartes explained in his Theory of Mind was favoring AI influence, specifically in two diverse ways.

It established that the body and the mind are two separate things, and this aspect creates the fundamentals of AI methodology, where the mental process, progression and course have a clear and independent existence, and every human mind follows his own law.

Once they believe and establish that the body and mind are separate, they need very inventive ways to connect both. Thereby, Luger established rationalist and empiricist philosophical tradition to form the most authentic and popular means for the AI revolution (Rich, et al,1999). For such rationalist, the outer world can be evidenced redesigned by the mathematical rules. Otherwise, they refuse to believe in this world full of distinct and clear ideas fermenting. However, such knowledge can be

explained by an empirical and introspective psychology. As per Luger, (1993), such knowledge plays a prominent role in AI development to program and structure (Liebowitz, 1998). Therefore, the AI philosophical foundation of thinking comes in the computational form of Russell & Norvig (1995). Their philosophical premise analyses the notions of intelligent agents to state that intelligence manifests rational action, in other terms, the intelligent act and agent performs an appropriate action in the prevailing situation. The AI philosophy conceptualizes such ideas, and that forms the fundamentals of AI, by associating the mind behavior compared to that of a computer or machine, because these machines perform on encoded knowledge and instructions with certain internal programmed language, and therefore, the function as per the given instructions, but human thoughts can be used to select the act and choose what kind of action to take (Harmon & King, 1995).

3.3 Problem Statement

One major problem is to understand the level of thoughts cultivated inside the human head. If someone thinks of dividing and processing his thoughts into an elevated memory, vision, and modules of psychological perception, learning and reasoning, they venture to get an accurate modularity, but fail to implement the module. Someone else may pick one neuron as one computational unit, which is justified in neurophysiology terms, abstract that neuron to make computational mechanism out of it. This venture can be justified as we are sure the human brains are acted and activated through neurons. However, when we discuss with experts who study neurons, they will argue what more neurons are capable of doing and what they fail to do. This aspect cannot be justified computationally to perform a good process of abstraction so that one specific model of lower intelligence can be formed. Therefore, it is very difficult to match with what the human brain knows and do not know, to match with the computer models (Bean, 2017).

3.4 Risk Analysis

Research on AI is primarily to focus on developing intelligent programs to simulate human intellect and acumen in several fields of Perception Building, Problem Solving, Reasoning, NPL, additional Learning, so as to develop an ability to manipulate and move objects as he wants (Chandrayan, 2017).

However, the major risk stands when the AI is successfully programmed to perform very devastating tasks. The autonomous, self-directed weapons is an act of AI system, which can be programmed and instructed to kill. When AI expertise falls in the wrong hands of a wrong person or nation, Such weapons can easily produce mass destructions. Also, the AI activities can instigate an arms race, and can unintentionally be the cause of AI war and this can result in mass devastation and calamities. To subdue such process of destructions by the enemies, such weapons should be designed and assigned to make them complicated to easily turn off. Hence, the human beings will lose a total command of such calamitous situation. Such risk starts with a narrow imaginations of AI, however, can grow the AI levels as autonomy increases (Chandrayan, 2017).

3.5 Goals

The eventual goal of AI attempt is to develop a very intelligent machine capable of planning, thinking abstractly, reasoning, comprehending complicated ideas, solving problems, learning rapidly from experience, which is an extended and accepted human intelligence definition (Russell & Norvig, 2016).

4) Aim and Objectives

4.1 Aim

To foster the understanding and progress of Artificial Intelligence and how it helps in logical deduction, for the use of humanity and Ecosystem and to evaluate the development theories and techniques for knowledge illustration and reasoning.

4.2 Objectives

1. To coordinate and integrate human intelligence with important advances of machine intelligence in theory and principles to put them into practice guiding all these central activities to uncover the details and analyze them in an appropriate and rigorous manner so as to successfully coexist and reinforce the actions of people for further growth,.
2. To coordinate social situations, problems, make contributions, enrich them to put them into practice through AI for application development.
3. To explore AI application methodologies that automatically improve through experience.

5) AI research, New Challenges and future role

We are presently striving at the foot of the mountain ridge waiting for a drastic change the technological revolution can bring. The AI has that potential to transform this change to steam-power the economy in the 21st century. The only hindrance is the risk of possible adverse effects. A significant research and study is needed to advance in several AI segments in the next two decades related to the fields of cognitive science, control theory, physical and mental attributes and performance factors and human psychology (Michael, 2016).

- A. Concerning the human challenges, people need to understand the likely impact on individual freedom, about privacy and consent, the concept formed by a combination of machine learning and acting approach using a large amount of our personal data.
- B. People should be prepared to adapt the new mechanisms and concepts of accountability concerning the decisions made through the AI.

AI permits industries and companies to procure innumerable and requisite data from any place for self progress analysis to convert them into action, and what matters the rule is where precisely the AI is used because AI technology emulates human performances (Panetta, 2018). AI is a new production factor and holds the potential source of growth, changing situations to get the work done, reinforcing new roles for people to drive future growth. AI entails innovation diffusion, capital and labor augmentation, with intelligent automation, because it can act like a hybrid of capital and labor, and permits the ability to transcend and amplify the existing capital and labor capacity to propel industrial and economic growth (Bakhshi, et al., 2014).

1. Clearing the pathway for the future generation with AI integrating human values, substance, intelligence to coordinate with machine intelligence to successfully coexist with advanced technology.
2. Encourage AI technology to generate self-improving adaptive laws to close the technological gap.
3. Advocate and sustain ethical codes for AI with best practices and tangible standards using intelligent machines.

4. Take an optimistic AI view to address the its value by proper distribution of knowledge, and highlight how AI can help nature, Ecosystem, environmental protection while taking ample care of the possible downsides of AI (Marr, 2017).

6) Conclusion

We human being wants to build super powered, intelligent machines, a kind of the most advanced and futuristic sort to perform all the functions a human being is not capable of. These machines are simply certain pieces of hardware associated with programmed functions as long as we collaborate with them responsibly (Anand, 2017).

“We love all the things of civilization that are intelligent, and therefore we try to amplify and extend our human abilities and intelligence using artificial intelligence which can help augment human potential to help flourish civilization extensively, as long as this extended technology remains beneficial.” Max Tegmark, President of the Future of Life Institute (House, 2016).

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