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ROBOTICS AND ARTIFICIAL INTELLIGENCE

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Abstract—Artificial intelligence (AI) is the imitation of human intelligence processes by computer systems, especially machines. Artificial intelligence is mechanization that is already impacting how users interact with and are overblown by the Internet. In our future, its impact is likely to only continue to grow. Artificial intelligence in robotics is used to respond the robot to our commands and make an appropriate action relevant to that particular command. By the help of artificial intelligence, we can save time and also decrease the manpower. The main theme of this paper is to explain the scope of artificial intelligence and its advancement in our daily life and also describe the concept how we are utilizing the artificial intelligence technology in robotics, and also how the artificial intelligence robots are applicable in promotions, surveys and in manufacturing fields. The pros and cons of AI in robotics are also discussed in this paper. The main purpose of the paper is to provide a set of recommendations to the research community.

Keywords—Artificial Intelligence, Machines, Mechanization, Robotics, Manufacturing fields, Research Community

INTRODUCTION

AI is an epithet recruit to mention to science to which aimed to impart the machines which are capable to do corresponding functions like planning, logic and the function which have the ability to see and hear. The domain symbolic AI is encapsulated by the name AI and it was popular until the extremity of the 1980s. In the sequence to vanquishing, the limitations in symbolic courses such as fuzzy systems, neural networks, and other computational models begin their popularity and they are leads to the name computational intelligence and the term is converted as the subfield of AI. In recent days AI has enclosed the whole world with its performance. Russell and

Norvig express their definition i.e., AI is the analysis of intelligence of human and it can duplicates the activities un-naturally. This definition indicates that the nature of AI and expressing how they are acting in our daily life. Nowadays AI technologies are applicable at driving, medical fields and assist humans in manufacturing companies. Recently AI technologies applicable at cars which are called autonomous cars which are having automatic steering session. Such developments are user-friendly and very comfortable and safer to the user. In this autonomous car, each car is equipped with Lidar sensors and cameras which are able to identify the 3d environment and uses to

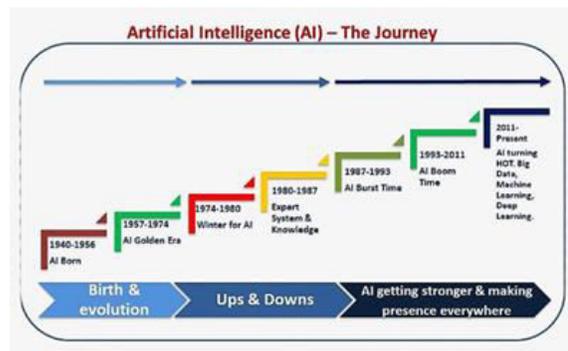
make appropriate decisions at the real traffic situations, AI has main limitations it is the lack of common sense. Ex: Microsoft develops a robot called as Tay which mainly created for making interactions, conversions on social media after its launching period it is disconnected and it can't able to identify the difference between positive and negative interactions of human.



Birth and Boom of Artificial Intelligence

The introduction of the computer took place when its calculating machines were implemented from this technical calculator of Babbage to the electro-mechanical calculator. The origination of automating theory can be located back to World War II with what was called as code splinters. The number of actions need to decrypt the German trigrams of the encryption machine without any idea about the routers spot showed to be too strenuous to be answer physically the insertion of automatic theory in calculating formulate the primary physical machines to portrayal for the operations such as codifying inspiring reserving and utilizing information certainly these four assignments are the basic requirements of information which are performed by humans. The originating work by Ramon is ejected spot the birth of

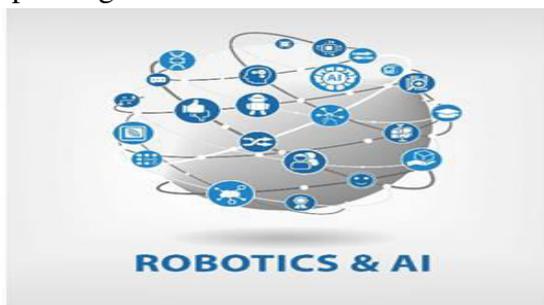
neuroscience forever a lot of neurological models and stimulus reaction were already and a get an idea before him the concept of neuron was introduces in history after McCulloch and pits improved link between neuroscience and automatic theory then review the first artificial neuron it prompts to the first calculus comprehensions algorithm known as its perception. This great concept was introduced among well-known scientists of the time namely; von Neumann was the colonist of the advanced computers and built connections for the connectionism.



AI and Robotics

Artificial intelligence (AI) is probably the most exciting field in robotics. It's certainly the most controversial. Everybody confess that a robot can work in an assembly line, but there's no consensus on whether a robot can ever be intelligent. Like the term "robot" itself, artificial intelligence is tough to define. Ultimate AI would be a restoration of the human thought process -- a man-made machine with our analytical abilities. This would append the ability to pursue just about anything, the ability to reason, the ability to use verbal communication and the ability to originate original ideas. Roboticists are nowhere near achieving this stage of artificial intelligence, but they have

made a lot of progress with more limited AI. Today's AI machines can imitate some specific elements of cerebral ability. The term AI encompasses the whole conceptualization of a machine that is intelligent in terms of both operational and social consequences. The difficulties meet in the blueprint of robotic systems capable to act in an uncontrolled environment led AI researchers to allow Robotics as a preferred test for Artificial Intelligence. Conversely, the explore in Robotics leads to the development of more and more complicated industrial robots, in particular, robot competitions are started: indeed they played a vital role in reestablishing a strict connection between AI and Robotics. That is nowadays one of the most promising developments of research both in the national context and at the European level. The problem is that building a high-level world model and generating a plan are time-consuming activities and thus these systems have shown to be inadequate for agents embedded in dynamic worlds. A more well-liked approach to action demonstration on robots is based on decision-making techniques, which exploit the effectiveness of the actions selected by the robot, depending on the outfitted framework.



Limitations

Artificial Intelligence has the efficiency to change the world but there are some problems to vanquish before it spread widely. Artificial Intelligence has many incidents of failure at the time of 2016. For example: In 2016 a humanoid robot is created for publishing the products and for conducting the surveys but it escapes from the lab and that leads to heavy traffic jam. That humanoid robot was arrested because it is collecting the people's opinion for the political leaders to acquire unfair advantages. The major limitations of Artificial intelligence are lack of common sense. AI robots cannot have the common sense and it cannot recognize that difference between a positive and negative command of humans. Another major limitation is AI requires high capitalism and they are very complex to understand the machines. Artificial intelligence in Robots consumes a lot of time to build, rebuild or repair. If any repair can take place then it is very complex to resolve the problem. Artificial intelligence robots should be handled by authorized and skilled persons only. Another major drawback of AI robots is it cannot feel and they cannot have any emotions to interact with humans emotionally in certain situations. Robots can misbehave with humans sometimes when any internal error takes place to it. Such an incident takes place in China. Robot named as Fatty which is used in a demonstration in China. Fatty smashes the glasses and injures the visitors because of the internal errors in it. There hasn't been known about Fatty since the incident. The above situations and

points indicated the limitations of Artificial intelligence in robotics.

Conclusion and Recommendations

We can learn more from past researches on robotics AI that may be succeeding or failing. To encourage the forward movement of AI it requires a logical and balanced interaction between approach certain Projects and creative research ideas, including with the Fears about the effect of technology on present society unparalleled eagerness of AI. Here we have some y. A clear view is morals and acceptable provocations required to taken as related which can be used to get the whole world progression of AI and its prospective wretched effects are will benefit from diminishing from the previous one. Those fears should not hamper the work of AI but it can try to increase on their levels by developing the ordering framework AI which will flourish in the future. It is difficult for all practical activities. It can link with the fun, it can be essential to perceive science from ding and leadership expenditure useful for future generations to develop our society. The following recommendations are last but not least relevant to the UK research community In UK Robotics and AI playing a major role in increasing their future, AI is more regrowth. So we have to install these types of AI characteristics in our society for the purpose we have to do some manipulations in our society and it should affect the working system model and change their skills base essentially it requires powerful nation-level engagement. To protect democracy it has an exact view of the present and future growth

or development of Robotics and AI. It is more essential to locate legal, governmental and moral purposes for categorization makes the more responsible introduction of Robotics and AI; more and its hard work requires to be invested in evaluating the technologies. Financial effect and know how it can maximize the profits by using these.

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