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Requisition of Artificial Intelligence

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ABSTRACT
Artificial Intelligence is the backbone of modern era. It is the branch of science and engineering of making intelligent machines. It is concerned with getting computers doing things intelligently like human beings. It is the concept of reading that how a human brain thinks, learn, take decisions, and act while trying to find solution of the provided situation, and then in the same way we use such results of the reading and understandings for developing intelligent and smart machines. While analyzing the power and capacity of the computer systems, a developer always wonders that is it possible for a machine to think. So, the simulation of Artificial Intelligence started with the motivation of creating intelligent machines like human beings. In the coming years, the whole world will be handled by artificial intelligence. A major seek of Artificial Intelligence is in the simulation of computer programs, algorithms and functions related with human intelligence, such as thinking, learning, reasoning and solving a particular problem. This paper discovers the requisition of artificial intelligence. The history of Artificial Intelligence had many cycles of progress and success. Further research and development programs are simultaneously carried out for betterment in technology. Recent progress in research and simulation of the artificial intelligence concepts are going hand to hand of researchers with enhancements in the abilities of real systems.
Keywords: AI, Learning, logical Reasoning, Perception

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I. INTRODUCTION

Artificial Intelligence is the one of the popular area of computer science and other subfields that is connected with the simulation of intelligent behavior of machines same as people behave in daily routine and do important decisions. Artificial Intelligence is based upon the fundamental implementation of data structures used in Knowledge organization and representation, the algorithms needed to apply that knowledge and programming techniques used in their implementation. "John McCarthy" is considered as the father of AI. Artificial intelligence is considered as the broader field of doing research and growth in science and technology based on domains such as:

- Biology
- Cognitive Science
- Physics
- Linguistics
- Mathematics
- Psychology
- Computer Science and Engineering.

Highly technical and specialized Research associated with artificial intelligence is the main area of interest of artificial intelligence involves programming systems in few particular following disciplines such as:

- Learning
- Planning
- Knowledge
- Logical Reasoning
- Capacity of manipulation and able to rotate and move particles
- Problem solving
- Perception

II. TYPES OF AI

Artificial Intelligence can be divided into two parts.

1. Strong Artificial Intelligence
2. Weak Artificial Intelligence

Strong Artificial Intelligence follows the principle that the machines could be design to think like human brains or in the other words act like humans to have capability to take quick decisions on the basis of current situation or environment. Thus Strong AI guarantees that in near future we will be surrounded by such kinds of machine which can completely works like humans and systems could have intelligence. Presently, Artificial intelligence is the interesting research area of researchers to create

strong AI. Weak AI is simply based on the principle by the fact that machines can be designed or simulates to act as if they are intelligent as human beings. Weak AI states that thinking, understanding, acting like features can be easily simulated while designing machines to make them more useful, powerful and reliable tools and this already started to happen and the world is going to be full of intelligent machines soon as researchers are working in this area very sensibly.

III. OBJECTIVES OF AI

- Is it possible for Machines to think same as humans?
- Is it possible for Machines to think logically?
- Is it possible for Machines to accomplish tasks same as humans?
- Is it possible for Machines to accomplish tasks logically?

IV. REQUISITION OF AI

Today, there is hardly any area which is working without help of artificial intelligence. It's really wonderful experience to work with machines .Human has made artificial copies of itself which are helping him to work almost every era of life. Researchers are working day and night to build more and more intelligent systems which can make tasks much easier. Imagine, we are on holiday and a machine is doing all our works to make us feel comfortable and enjoy our holiday. It sounds really good. There is hardly any field which is not using information technology for further explorations. The following is the list of applications in which artificial intelligence is working today and in coming future; the list is going to be infinite.

- Heavy Industry
- Computer Aided Design
- Speech Recognition
- Natural Processing Language
- Game Playing
- Computer Vision
- Expert Systems
- Intelligent Robots
- heuristic classification
- Learning to read postcodes
- Stock market prediction
- Debt risk assessment
- Handwriting recognition
- Data Mining
- Neural Net6works
- Fuzzy Logic
- Artificial Life
- Artificial Immune System
- Optical character recognition
- Strategic planning
- Translation and Chatter bots
- Evolutionary Computation.
- Functional Programming
- Financial Institution
- Medical Diagnosis
- Clinical Decision Support Systems
- Heart Sound Analysis
- Education System
- Inventory Control
- Computer Art
- Virtual Reality
- Knowledge Representation
- Automated Reasoning

We can buy machines which can play with us. The intelligent machines which are programmed with the same capability we are holding. The machines are programmed in such a way that they are able to calculate best possible moves within seconds and conclude a best approach of movement in the game. One can have company of artificial friend for time pass. Speech Recognition is a convenient way to train your machines which act after recognizing speech. Feature extraction method is used to extract voice using some language models and acoustic models. Just getting a bundle of words into a machine is not quite enough. Parsing of sentences is also not sufficient. There is need to provide a machine the capability of understanding of the domain the text is about, and this is presently possible with the concept of natural language processing which is itself a part of artificial intelligence. The world coordinate system is composed of three-dimensions, but the inputs to the human eye and cameras are of two dimensions. Some good algorithms can work solely in two dimensions, but full computer vision needs partial three-dimensional capability that is not just in a set of two-dimensional views and clips. Today, there are only limited methods of representing three-dimensional information directly, and they are not as perfect as what humans evidently use. Artificial intelligence is getting popular in developing computer visions efficient. The expert systems are the computer applications developed to solve complex problems in a specific domain, which matches the level of human intelligence and expertise. An expert system is a computer application that performs a task that can be performed by a living expert. An Expert System is a piece of software which uses stored information and convert it into useful knowledge and make decisions and give advices to its clients. An Expert System is a program that uses historical information and derives solutions to problems in a specific task domain along with decisions. A robot can carry out many operations such as the manufacturing of toys in a factory. Robots can attach parts, paint, etc. The robot

follows instructions of a control program to work out the task provided to it by a human. All these robots have sensors to sense things. These robots can do the same thing over and over again as programmed by the control system. A sensor is a device which can sense physical data from its environment and then this information is input into a machine. Sense of light, heat, movement, pressure, temperature, sound. An intelligent robot has many different sensors, large processors and a large memory in order to show that they have intelligence. The robots will learn from their mistakes and be able to adapt to any new situation that may arise. An intelligent robot can be programmed with its own expert system, e.g. a factory floor is blocked with fallen boxes. An intelligent robot will remember this and take a different route. These intelligent robots carry out many different tasks such as automated delivery in a factory, pipe inspection, bomb disposal, exploration of dangerous/unknown environments. Different humans write differently. Human is so intelligent that he is training computers to recognize different handwritings. Since, there is a high requirement to train the computer system to recognize different human handwritings since humans all write certain letters in different ways. Medical Diagnosis of patients is very helpful to test and generate reports for patients so that future treatments can be made easy. Taking historical data of the patients who are suffering from similar types of diseases, observing, interpreting and analysis of historical data helps doctors to analysis of diseases and train them to do treatments of the patients. This technology provides you to keep track of heart sound of human. There is discovery of companion robots for care of elders. Systems help in scan digital images which are computer aided for health analysis. For Financial trading competition, organizations are using artificial intelligence to compete in the market. Financial organizations have long used artificial systems to detect charges or claims outside of the norm, perform human investigation. Banks use artificial intelligence systems to organize operations in their organizations, investment in stocks, and manage properties. AI scientists have created many significant tools to solve the problems in computer science. Many of their innovations have been adopted by computer science and are no longer considered a part of AI. But actually, many were originally developed in AI labs like

- Computer Mouse
- Interpreters
- Graphical user interfaces
- Symbolic programming
- Functional programming
- Dynamic programming
- Rapid development environments
- Automatic storage management

Due to growing urban population in new mega cities, there is lack of available physical space which becomes a challenge to different modes of transport. People travel more frequently and covering greater distances than ever before, while we expect safety, reliability, and swiftness from travel operators and the technology. To fulfill the needs of the growing transportation demands, intelligent transportation systems enable users to be safer and smarter use of available transport networks using Artificial Intelligence. The music industry has always been affected by changing technology. With artificial intelligence, researchers are trying to make the machines emulate the activities of the skillful musician. Music composition, music theory, sound processing are some of the major areas on which research in Music and Artificial Intelligence is focused.

V. CONCLUSION

Artificial intelligence is the building block of human intelligence. Using artificial intelligence, human intelligence is programmed in a digital computer. Aspects of human intelligence like understanding , learning, response , finding solution for problems are already implemented using artificial intelligence .AI researchers have implemented artificial technology in every field. Still researchers of artificial intelligence are doing research to implement artificial intelligence for commonsense knowledge to make daily life routines super easy.

References

[1] Bowman, M., Debray, S. K., and Peterson, L. L. 1993. Reasoning about naming systems. .

[2] Ding, W. and Marchionini, G. 1997 A Study on Video Browsing Strategies. Technical Report. University of Maryland at College Park.

[3] Fröhlich, B. and Plate, J. 2000. The cubic mouse: a new device for three-dimensional input. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems

[4] Tavel, P. 2007 Modeling and Simulation Design. AK Peters Ltd.

[5] Sannella, M. J. 1994 Constraint Satisfaction and Debugging for Interactive User Interfaces. Doctoral Thesis. UMI Order Number: UMI Order No. GAX95-09398., University of Washington.

[6] Forman, G. 2003. An extensive empirical study of feature selection metrics for text classification. J. Mach. Learn. Res. 3 (Mar. 2003), 1289-1305.

[7] Brown, L. D., Hua, H., and Gao, C. 2003. A widget framework for augmented interaction in SCAPE.
[8] Y.T. Yu, M.F. Lau, "A comparison of MC/DC, MUMCUT and several other coverage criteria for logical decisions", Journal of Systems and Software, 2005, in press.
[9] Spector, A. Z. 1989. Achieving application requirements. In Distributed Systems, S. Mullender

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