**AN OVERVIEW OF APPLICATIONS ON** **MACHINE LEARNING**

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**ABSTRACT**

Intelligence is the human study of both natural and artificial intelligence at the top-down neural, cognitive, functional, and logically reductive levels of expression. Taxonomy and Nature of Intellect. It analyzes the role of knowledge in the development of human intelligence and the needs of logical abstraction in modeling the brain and natural intelligence. A formal model of intelligence known as the General Abstract Intelligence Mode (GAIM) is developed to provide a basis for explaining advanced natural intelligence mechanisms such as thinking, learning and reasoning. The framework for measuring the intelligence capability of people and systems is comparatively explored in the form of intelligence quotient, intelligence equivalence, and intelligence metric. Based on the GAIM model and abstract intelligence theories, the compatibility of natural and machine intelligence is revealed to explore a wide range of abstract intelligence paradigms, such as natural, artificial, machine-powered intelligence and their technological applications.

**INTRODUCTION**

This technology is growing very fast and we are dealing with different new technologies every day. Here, information technology is  one of the booming technology artificial intelligence, which is ready to create a new revolution in the world by making intelligent machines. Artificial intelligence is now all around us. It is currently engaged in several fields, from general to specific, such as self-driving cars, playing chess, proving theorems, playing music, painting, etc. AI is one of the exciting and versatile fields of computer science with great potential in the future. . AI tends to make a machine behave like a human. Artificial intelligence consists of two words artificial intelligence and intelligence, where artificial intelligence defines "man-made" and intelligence "thinking power", so artificial intelligence means "thinking power created by humans. "It is a field of computer science in which we can. create intelligent machines that can act like humans, think and make decisions "Artificial intelligence exists when a machine has human-based abilities like learning, reasoning and problem solving—programming a machine to do a job, even though you can create a machine." with programmed algorithms that can work. with its intelligence and this is the size of artificial intelligence. It is believed that artificial intelligence is not a new technology and some people claim that according to Greek myth there were mechanical men in the early days who could work and behave like humans.

**Keywords:**

Artificial, Technology , Communication, Computer, programming And Data

**OVERVIEW OF AI**

According to the father of artificial intelligence, John McCarthy, it is "the science and technology of making intelligent machines, especially intelligent computer programs." Artificial intelligence is a way to make a computer, computer-controlled robot, or software think intelligently, just like intelligent people do. Artificial intelligence is achieved by studying how the human brain thinks and how people learn, decide and work when trying to solve a problem, and then uses the results of this research as a basis for developing intelligent programs and systems.

**Philosophy of AI**

Thus, the development of artificial intelligence began with the intention of creating the same kind of intelligence in machines that we find and value in humans.

**Goals of AI**

Creating expert systems - systems that behave intelligently, learn, show, explain and advise their users. Realizing human intelligence in machines - creating systems that understand, think, learn and behave like humans.

**Contributes to AI**

 Artificial intelligence is a science and technology based on disciplines such as computer science, biology, psychology, linguistics, mathematics and engineering. The main focus of artificial intelligence is the development of computer functions related to human intelligence, such as reasoning, learning and problem solving.

**Components of AI**

 The programming without and with AI is different in following ways

**Programming with AI**

A computer program with AI can answer the generic questions it is meant to solve. Quick and Easy program modification.

**Gaming−**

AI plays a key role in strategic games such as chess, poker, tic-tac-toe, etc., where a machine can come up with a large number of possible positions based on heuristic knowledge.

**Natural Language Processing−**

It is possible to interact with the computer that understands natural language spoken by humans.

 **Expert Systems−**

Some applications integrate machines, software and special data to provide reasoning and advice. They provide explanations and advice to users.

**Vision Systems−**

These systems understand, interpret, and comprehend visual input on the computer. For example,

 A spying aero plane takes photographs, which are used to figure out spatial information or map of the areas.

 Doctors use clinical expert system to diagnose the patient.

 Police use computer software that can recognize the face of criminal with the stored portrait made by forensic artist.

**Speech Recognition−**

 Some intelligent systems are able to hear and understand language in the form of sentences and their meaning when a person speaks to it. Able to handle different accents, slang words, background noise, changes in human noise due to cold **etc.**.

**Handwriting Recognition−**

The handwriting recognition software reads the text written on paper by a pen or on screen by a stylus. It can recognize the shapes of the letters and convert it into editable text.

**Intelligent Robots−**

Robots are able to perform the tasks given by a human. They have sensors to detect physical data from the real world such as light, heat, temperature, movement, sound, bump, and pressure. They have efficient processors, multiple sensors and huge memory, to exhibit intelligence. In addition, they are capable of learning from their mistakes and they can adapt to the new environment.

**History of AI** Here is the history of AI during 20th century –

**Year Milestone / Innovation**

1923 Karel Čapek play named “Rossum's Universal Robots” (RUR) opens in London, first use of the word "robot" in English.

1943 Foundations for neural networks laid.

1945 Isaac Asimov, a Columbia University alumnus, coined the term Robotics.

1950 Alan Turing introduced Turing Test for evaluation of intelligence and published Computing Machinery and Intelligence. Claude Shannon published Detailed Analysis of Chess Playing as a search.

1956 John McCarthy coined the term Artificial Intelligence. Demonstration of the first running AI program at Carnegie Mellon University.

1958 John McCarthy invents LISP programming language for AI.

1964 Danny Bobrow's dissertation at MIT showed that computers can understand natural language well enough to solve algebra word problems correctly.

1965 Joseph Weinbaum at MIT built ELIZA, an interactive problem that carries on a dialogue in English.

1969 Scientists at Stanford Research Institute Developed Shakey, a robot, equipped with locomotion, perception, and problem solving.

1973 The Assembly Robotics group at Edinburgh University built Freddy, the Famous Scottish Robot, capable of using vision to locate and assemble models.

 Significant demonstrations in machine learning

 Case-based reasoning

 Multi-agent planning

 Scheduling

 Data mining, Web Crawler

 natural language understanding and translation

 Vision, Virtual Reality

 Games

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