Ethical Consideration in Artificial Intelligent

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ABSTRACT
Various human abilities will eventually be replaced, supplemented, or taken over by intelligent machines. Artificial intelligent refers to machine or software intelligent. Artificial intelligence is a subfield of computer science which is one of the popular areas in computing nowadays. Artificial intelligence as a branch of computer science has gained popularity due to the numerous ways it has enhanced people's quality of life. The performance of the industrial and service systems has significantly increased artificial intelligence recognition in the previous two decade so fit existence. The fast-expanding field of expert systems technology is a result of research in the area of artificial intelligence. In The definition of artificial intelligence is discussed in this paper, along with some of the ways it is used in contemporary science and technology In particular, it takes into account how this technology is now being used in the fields of robotics, expert systems, aviation, machine learning, and weather forecasting in the actual world. Analysis of the prospects for artificial intelligence in the future ends the article.

Keywords
Robotics, expert system, Machine learning, software intelligent

1. INTRODUCTION
Artificial intelligence (AI) is the study and creation of intelligent machines and software that can reason, pick up knowledge, communicate, manipulate, and perceive objects. The regular functioning of Artificial Intelligence, like the recent AI model CHATGPT, relies on user interaction [1]

Artificial intelligence (AI) is a field that was developed in the 1950s, is described as a system capacity to comprehend correctly learn from outside input, adopt the learning outcomes to accomplish particular goals and address issues through adaptability [2]. It is a subfield of computer science that demonstrates how machines It is a subfield of computer science that demonstrates how machines can reason, learn, and behave like people [3].

In light of this, houseman offered two AI capabilities: the first is the generation of repeated tasks through the prediction of categorical data outcomes, and the second is the ability to make decisions similar to those of humans through the use of algorithms [4].

Intelligence is defined as the sum of perception, analysis, and reaction in artificial intelligence. It differs from psychology in that computing is emphasized, and from computer science in that perception, reasoning, and action are emphasized.

AI technology is already sufficiently developed in many of its applications to provide genuinely beneficial advantages. Expectations in a variety of scientific and technological fields, such as natural language processing, language comprehension, robotics and sensor systems, intelligent computer-based education, neural computers, architecture, finance and business sectors, the software and gaming industries, as well as the aerospace, pharmaceutical, and climate change fields Prediction, or expert systems that tackle complex issues, is one of the core focuses of artificial intelligence.

In this connection, I recall that John McCarthy, who is considered by many to be the father of artificial intelligence [5], described artificial intelligence as the science and engineering of creating intelligent machines, especially intelligent computer programs. The term "AI" is usually used when machines replicate mental processes such as learning and problem-solving that humans normally associate with other human minds [6].

Reasoning, Programming, Artificial Life, Belief Modification, Data Mining, Distributed AI, Expert Systems, Genetic Algorithms, Systems, Knowledge Representation, Machine Learning, Natural Language Understanding, Neural Networks, Proof Theorems, Constraint Satisfaction, and Theory of Computation are classified as sixteen (16) subfields of artificial intelligence. Research into artificial intelligence (AI) is gaining attention in the 21st century in various fields such as law, engineering, science, education, medicine, business, accounting, finance, and marketing [7]. The scope of AI has expanded dramatically as intelligence enabled by machine learning has had a profound impact on industry, government and society.

Artificial intelligence is a rapidly developing technology that is having a significant impact on many different aspects of life. Its application areas include many different areas of life where it functions as an expert system.

2. HISTORY OF ARTIFICIAL INTELLIGENT
As a symbolic system designed to mimic human intelligence, modern artificial intelligence of human cognition was first developed in 1956, marking the official start of artificial intelligence. At Dartmouth College in Hanover, New Hampshire, in the USA, Artificial Intelligence (AI) was initially conceived. The majority of scientists, including Marvin Minsky from MIT, who attended the conference, were fairly upbeat about the future of artificial intelligence. The idea that computers could play chess with the help of artificial intelligence was introduced by Claude Shannon's work. However, AI has been around since the year 2005, when Asimo, a robot that was able to mimic human intelligence and human ability, became the closest robot to artificial intelligence and human ability. Work on artificial intelligence continued slowly until the early 1960s. The next step in the development of human intelligence is the act of employing mental energy.

2.1 Applications areas of Artificial Intelligence
Along with the ongoing advancement of global technology, intelligent technology has recently advanced quickly. Artificial Intelligent has been one of the members of the emerging technology in the global world which had long been used in

many different industries, including voice recognition, picture identification, driverless technology, video detection, biometrics, and other areas. AI that functions as an expert system can assist humans with carrying out some specialized activities, such as diagnosing diseases, spotting and identifying objects, performing fingerprint biometrics, and more [8]. As a result, AI boosts collaboration, productivity, and service quality while also cutting costs [9, 10]. AI has numerous and extensive applications areas in computing.

2.2 Applications of Artificial Intelligence in Natural sensation

Despite the ongoing discussion about whether or not AI will eventually replace doctors, it is clear that this is still a research and development phase for the technology, and so it is safe to assume that, barring the occurrence of an AI singularity, AI will be taking the place of physical doctors anytime soon [11]. But AI has the potential to and will play a transformative role in helping physicians diagnose and assess the prognosis of many medical diseases. So it makes sense that AI could eventually take the place of human judgment in some functional medical fields, like radiography.

The ongoing expansion of healthcare data and the quick advancement of big data analytics will continue to promote the success of AI application in healthcare, even though developing and implementing such technologies may seem to be in the world of science fiction. Successful application of AI can reveal hidden clinical trends in the vast healthcare data when used in the right optimization technique and context. AI may offer beneficial treatments that have already been used, which cuts down on the time needed for diagnosis [12] thanks to the pooled large data supported by healthcare cloud platforms. In situations when there would normally be a mortality rate, such method would be crucial and effective for making judgments and giving treatments.

Both opponents and supporters of AI affirm that it has a built-in impact for therapeutic and productivity improvement. The ability to find hidden patterns in enormous amounts of data is at the heart of it, and based on those patterns, the hospital can improve service delivery, improve performance, and manage time and expenses more effectively. Health practitioners have been urged to adopt evidence-based practice over the years to increase usefulness [11, 12]. In the shortest amount of time feasible, AI now merges primary data gathered from patients with secondary data received from sources like electronic books and study notes, and then synthesizes the material to produce data that the doctors can use to make judgments.

Suffice it to say that imaging has opened the door to possible medical applications of AI for diagnosing, treating, and predicting disease. One of its many uses is in areas or conditions that require imaging for diagnosis. Cardiology, cancer and neurology have benefited the most. AI can detect cancer in its early stages and save people before the problem becomes deadly, but poor prognosis is clearly one of the challenges associated with cancer-causing diseases [13].

AI uses sophisticated learners to provide insight into large amounts of health data, either because it is an advanced machine learning algorithm or based on the accuracy of feedback-based results. These feedback loops allow the doctor to interact with her AI during learning sessions, and the system provides up-to-date medical data from trusted sources [14]. A remedy for “humans make blunder” adage can be found in the relevance of AI systems to reduce the diagnostic and therapeutic errors inherent in human practice. In addition, artificial intelligence (AI) systems collect data and predict population vulnerabilities to enable real-time inference and health risk mitigation. Boundless and exciting [15]. The human genome is the gold standard for big data and requires sophisticated systems for use in predictive medicine. However, it is important to remember that when using an AI system, automation is not the goal and it is imperative that the operator fully understands the AI system. ‘

2.3 Applications of Artificial Intelligence in Network Technology Management

Self-learning capabilities of artificial intelligence enable machines to carry out particular jobs by mimicking human actions. There is a strong connection between artificial intelligence and several academic fields. Artificial intelligence is largely influenced by the advancement of computer science. Artificial intelligence technology is necessary for the advancement of computer network technology. Consequently, computer network technology includes artificial intelligence [21].

There are only three aspects of artificial intelligence used in computer network security management: intelligent intrusion detection technology, intelligent anti-spam technology, and intelligent firewall technology. Utilizing intrusion detection technology can increase the network's security and dependability, the security of network data, and the security, confidentiality, availability, and availability of the resources within a computer network system. An artificial intelligence-based technique called the intelligent anti-spam system guards against spam. The security of client information is unaffected by anti-spam technology, which can also successfully track and scan customer correspondence. When compared to other intelligent systems, intelligent firewalls use intelligent identification techniques like statistics, memory, probability, etc. to process and analyze data, effectively reducing the number of complex calculations that computers must carry out during the matching process and significantly enhancing network attack behavior. [21].

3. OTHER APPLICATIONS AREAS OF ARTIFICIAL INTELLIGENT IN MODERN SCIENCE

The use of intelligent software to assist our daily activities has increased in the new decade. Applications having human-identical capabilities, such as Siri, Google Assistant, Alexa, Cortana etc., act as companions to human endeavour. Among their many functions, they can perform activities like setting reminders, playing music, and even cracking jokes. Particularly over the past ten years, efforts to build AI have yielded some impressive results. This success is due to the availability of enormous amounts of data and access to sophisticated computational tools for analyzing it.

Self-driving (Autonomous) vehicles are popular in this regard, and when one examines it, the first thing that comes to mind is a complicated combination of sensors, transducers, actuators, complex computation algorithms, and high-performance computer systems [22]. These technologies are used to give cars fundamental knowledge such as traffic lights, when to drive hurriedly or unhurriedly etc.

According to [22], DARPA (Defense Advanced Research Projects Agency) was the first organization to investigate the concept, and significant developments have been observed since 2010. Since then, self-driving technology has advanced significantly in several areas, including on-road (passenger-

carrying) vehicles, among others. These automobiles are sometimes an integral element of the businesses that operate them [23].

AI needs data, lots and proportion of data to operate efficiently. To identify behavioral patterns and develop a reaction based on them, every piece of data that is produced requires careful analysis. Our brains record details about speech, expressions, appearance, etc. when people engage with one another. Data science comes in here. There are other further branches of artificial intelligence, such as machine learning, deep learning, robotics, neural networks, fuzzy logic, and many more.

4. NOMINAL OF ARTIFICIAL INTELLIGENT?

Artificial intelligence (AI) is a new technical field that students who study develop ideas, methods, strategies, and application systems for imitating and enhancing human intelligence [24]. John McCarthy first put forth the idea of AI in 1956, defining it as the "science and engineering of constructing intelligent machines, especially intelligent computer programs." Making machines operate intelligently, much like the human mind, is the goal of AI [25]. AI is currently taught as an interdisciplinary course involving many different fields.

4.1 Artificial intelligent Narrative

Artificial Intelligent	Machine Learning, Neurocomputing, Pattern Recognition, Data Mining, KDD.
Data Mining	Data bases, AI, Machine learning, Neurocomputing, Pattern recognition
Data Bases	KDD, Data mining
KDD	Data bases, data mining, machine learning, pattern recognition, statistics, neurocomputing, AI
Statistics	KDD, data mining, pattern recognition,
Pattern recognition	Statistics, AI, Data mining, KDD, machine learning, neurocomputing
Machine learning	AI, KDD, Data mining, pattern recognition, neurocomputing
Neurocomputing	AI, Data mining, KDD, machine learning, pattern recognition

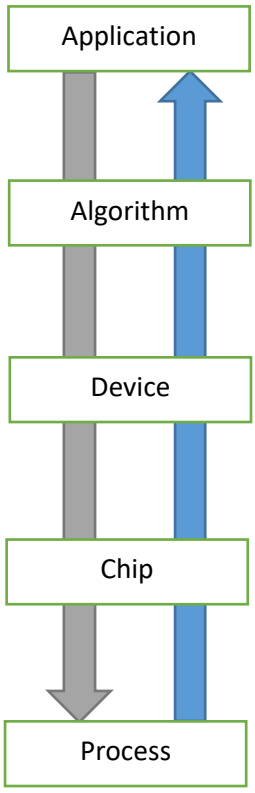
4.2 Brief Development Chronicles of Artificial Intelligent

1956	AI was initially proposed at the Dartmouth Conference in USA
1959	Machine learning was proposed Arthur Samuel
1976	Machine translation and the negative effects of some scientific tales brings about the funding for Artificial Intelligent across the panel
1956-1976	The earliest successful period of Artificial Intelligent Dartmouth conference express Artificial Intelligent ideas and possible progress.
1976-1982	Initial deficiency stage. Artificial Intelligent afflictions start with assessment and request due to inadequate computing power, high computational complexity, and great difficulty in realizing inference.
1985	Decision Tree standard with enhance Visualization Capabilities and Multilayer Artificial Neural Network violate the Early Recognition edge
1987	LISP machines market flop during this era.
1982-1987	Another deficiency periods. The acceptance of expert systems that could constructively reason logical rules and answer queries about a particular domain led to the advance of the fifth generation of computers.
1997	World chess champion Garry Kasparov was defeated by deep blue
1987-1997	The second low surge of the skills focused more on abstract reasoning and models based on symbol processing were terminated.
2006	Deep learning was started by Hinton and his students to actualise AI skills
2010	The epoch of big data emanated
1997-2010	Salvage era emerge: computing power was perfected and Internet technology spread hurriedly
2010	The era of rapid growth; a new generation of information technology has caused a revolution of the information environment and databases. Multi-model data such as large amounts of images, audio, and text emerged one after another. Improved computational performance.

2014	Intelligent assistant was release by Microsoft, making the first individual Microsoft Cortana in the world.
2016	The champion Go player Lee Sedol defeated Alpha Go 4-1 in March
2017	October: The Deep Mind team has released AlphaGo Zero, the most powerful version of AlphaGo.

5. AN OVERVIEW OF ARTIFICIAL INTELLIGENT TECHNOLOGIES

AI technology is multi-layered, covering layers of applications, algorithmic mechanisms, toolchains, devices, chips, processes, and materials.



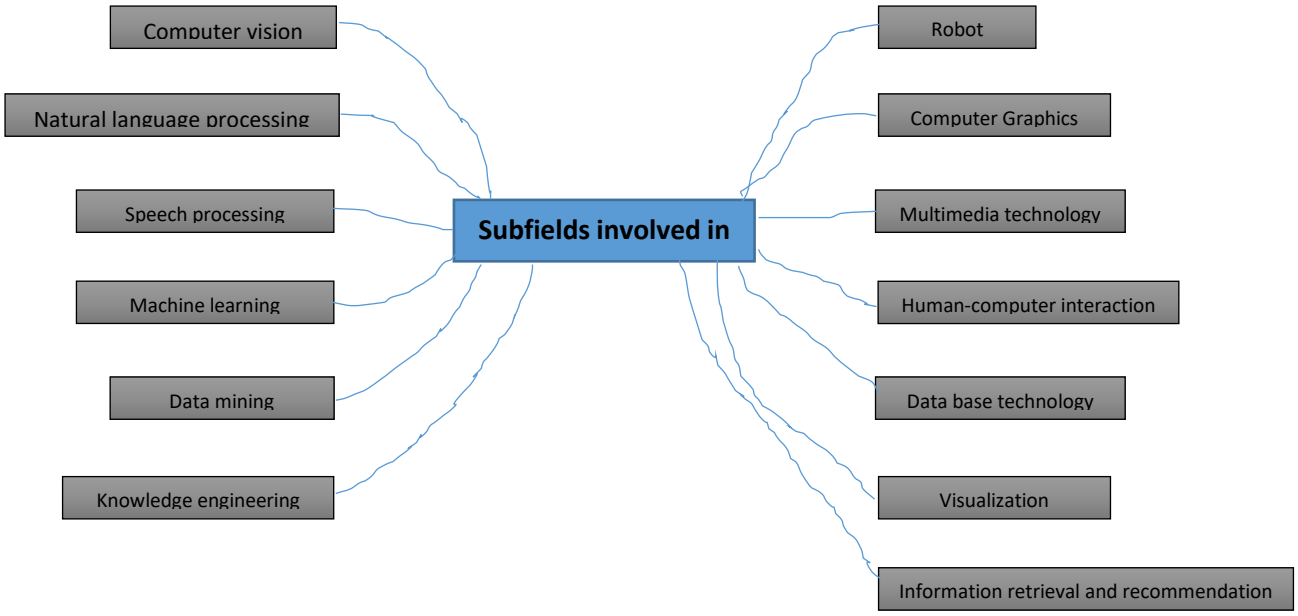
5.1 Types of Artificial Intelligent Strong Artificial Intelligent

A strong AI perspective envisions building intelligent machines that can actually reason and solve problems [26]. These machines are sentient, self-aware, able to think independently about problems and determine the best course of action, have their own morals and worldviews, and have their own needs for survival and safety etc. It is believed that they have the same instincts. In a way it can be seen as a new civilization.

5.2 Weak Artificial Intelligent

According to the weak AI theory, intelligent computers cannot actually think critically or come up with solutions [27]. These artificial intelligences lack true intelligence and self-awareness; they are just intelligent-looking.

5.2.1 Sub-fields of Artificial Intelligent



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5.3 Technical fields and application fields of Artificial Intelligent

Areas of AI application	Smart Manufacturing, Smart Finance, Smart Education, Smart Healthcare, Smart Cities, Digital Government, Autonomous driving
Areas of AI technology	Expert Systems, Computer Vision, Knowledge Extraction, Robotics, Smart Adaptive Learning, Planning and Optimization, NLP
Research methods	Evolutionism, Bayesian, Connectionism (e.g., deep learning)
Back propagation neural networks	Genetic Programming, Probabilistic Inference, Inverse Deduction, Kernel Machines, Linear, Decision Trees, Logistic Regression, Random Forests, Support Vector Machines. algorithm

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5.4 Artificial Intelligent Application Fields – Intelligent Healthcare

- Rapid Development of Personalized Medicine Using Medicine Mining AI Assistants
- Nutrition and physical and mental health management
- Hospital mnangement: Structured Services Related to Medical Records (Focus)
- Media research support:
  Research support for biomedia researchers
- Virtual Assistant:
  Electronic voice recording, intelligent guidance, intelligent diagnosis, and medical recommendations.
- Medical photo:
  Medical image recognition, image tagging, 3D image reconstruction
- Aid in diagnosis and treatment:
  Daignosis Robot
- Disease risk prognosis:
  Disease risk prediction based on gene sequence

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